

SOLICITATION, OFFER AND AWARD		1. THIS CONTRACT IS RATED ORDER UNDER DPAS (15 CFR 350)	RATING DO-09	PAGE OF PAGES 1 259
2. CONTRACT NO. NNJ04AA02C	3. SOLICITATION NO.	4. TYPE OF SOLICITATION	5. DATE ISSUED	6. REQUISITION/PURCHASE NO. 42000 36339 4222636351
7. ISSUED BY ASA Lyndon B. Johnson Space Center 1 NASA Parkway/BG Houston, TX 77058		8. ADDRESS OFFER TO (other than agency) APPROVED <i>[Signature]</i> JSC PROCUREMENT ORDER 1600 04-03		

Sealed offers in original and _____ copies for furnishing the supplies or services in the Schedule will be received at the place specified in Item 8, or if handcarried, in the depository located in _____ until _____ DATE local time.

CAUTION — Late Submissions, Modifications, and Withdrawals: See Section L, Provision No. 52.214-7 or 52.215-10. All offers are subject to terms and conditions contained in this solicitation.

10. FOR INFORMATION CALL: A. NAME Linda F. Riviera	B. TELEPHONE (281) 483-0136	FAX	C. E-MAIL ADDRESS linda.f.riviera@nasa.gov
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* Item 12 does not apply if the solicitation includes the provisions at 52.214-16, Minimum Bid Acceptance Period.

OFFER (Must be fully completed by offeror)

In compliance with the above, the undersigned agrees, if this offer is accepted with 60 calendar days from the date for receipt of offers specified above, to furnish any or all items upon which prices are offered at the price set opposite each item, delivered at the designated point(s), within the time specified in the schedule.

13. DISCOUNT FOR PROMPT PAYMENT (See Section I, Clause No. 52-232-8)	10 CALENDAR DAYS (%) 0.00%	20 CALENDAR DAYS (%) 0.00%	30 CALENDAR DAYS (%) 0.00%	0 CALENDAR DAYS (%) 0.00%
14. ACKNOWLEDGMENT OF AMENDMENTS The offeror acknowledges receipt of amendments to the SOLICITATION for offerors and related documents numbered and dated:	AMENDMENT NO.	DATE	AMENDMENT NO.	DATE
	1	5/14/03	4	5/21/03
	2	5/20/03	5	5/27/03
	3	5/21/03	6	5/30/03

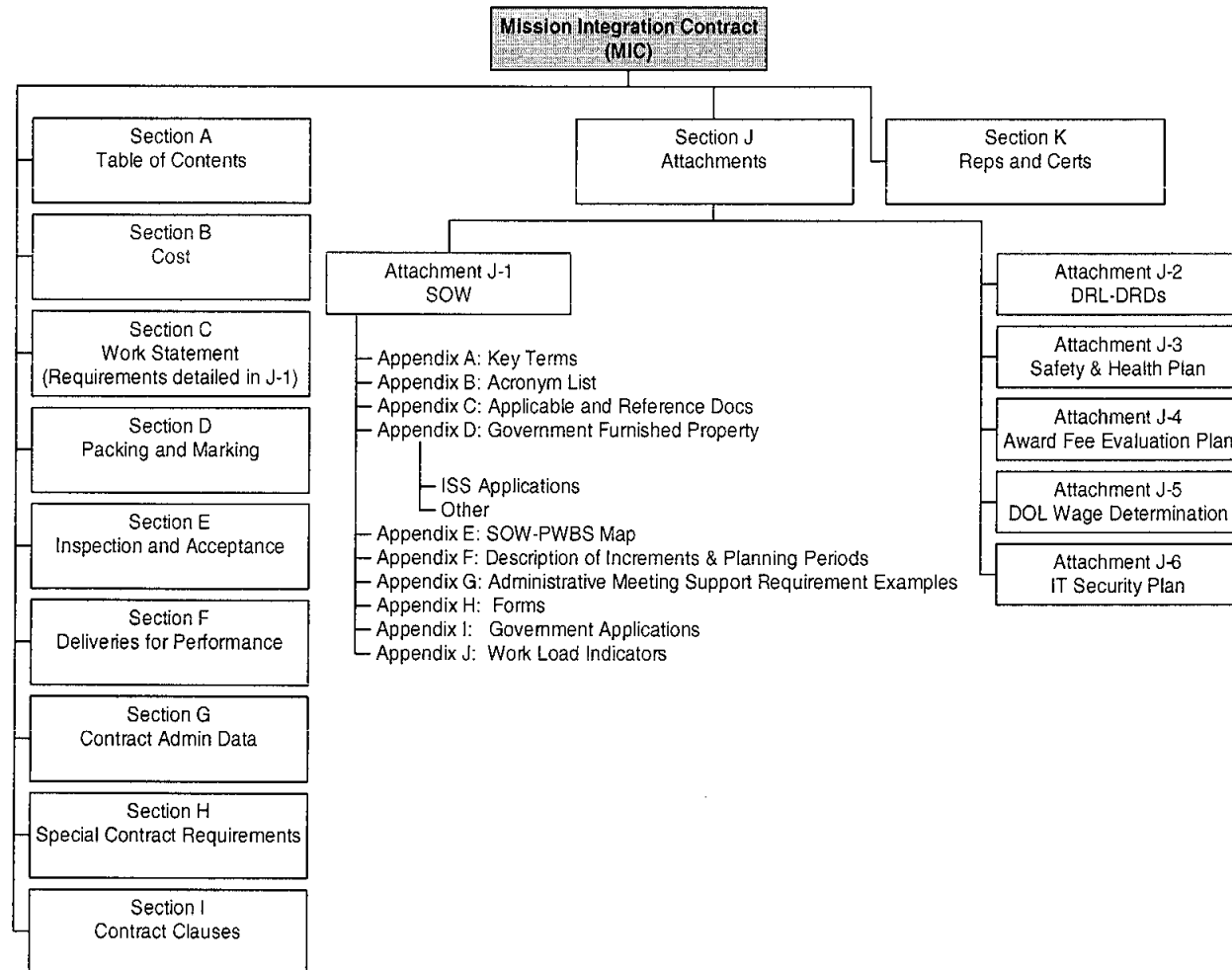
15A. NAME, ADDRESS OF OFFEROR 2525 Bay Area Blvd., Suite 300 Houston, TX 77058-1556	Code Facility	16. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER Mary K. Kerber Director, Contracts & Pricing
15B. TELEPHONE (& Ext) (281) 280-1961 X	15C. CHECK IF REMITTANCE ADDRESS IS DIFFERENT FROM ABOVE - ENTER SUCH ADDRESS IN SCHEDULE.	17. SIGNATURE <i>Mary K. Kerber</i>
		18. OFFER DATE 9/8/03

AWARD (To be completed by Government)

19. ACCEPT ITEMS NUMBERED:	20. AMOUNT	21. ACCOUNTING AND APPROPRIATION
22. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION: 41 U.S.C. 2034(c) <input type="checkbox"/> 41 U.S.C. 253(c) <input type="checkbox"/>	23. SUBMIT INVOICES TO ADDRESS SHOWN IN Section G.3 (4 copies unless otherwise specified)	
24. ADMINISTERED BY (If other than item 7) Code	25. PAYMENT WILL BE MADE BY see Section G	
26. NAME OF CONTRACTING OFFICER (Type or print) Linda F. Riviera	27. UNITED STATES OF AMERICA <i>Linda F. Riviera</i>	28. AWARD DATE 11/5/03

IMPORTANT — Award will be made on this Form, or on Standard Form 26, or by other authorized official written notice.

Mission Integration Contract



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PART I - THE SCHEDULE
SECTION A
CONTRACT FORM

A.1 DETAILED TABLE OF CONTENTS

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SECTION F**DELIVERIES OR PERFORMANCE****F.1 LISTING OF CLAUSES INCORPORATED BY REFERENCE**

NOTICE: The following contract clauses pertinent to this section are hereby incorporated by reference:

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

CLAUSE NUMBER	DATE	TITLE
52.242-15	AUG 1989	STOP-WORK ORDER AND ALTERNATE I (APR 1984)

II. NASA FAR SUPPLEMENT (48 CFR CHAPTER 18) CLAUSES

CLAUSE NUMBER	DATE	TITLE
None		None

(End of Clause)

F.2 PERIOD OF PERFORMANCE

The period of performance for the level-of-effort work of this contract shall be the contract effective date through September 30, 2008.

(End of Clause)

F.3 COMPLETION OF WORK (JSC 52.211-95)(OCT 2001)

The completion-form work required under this contract, including submission of all reports, shall be completed on or before September 30, 2008.

(End of Clause)

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PART I - THE SCHEDULE

SECTION B - SUPPLIES OR SERVICES AND PRICE/COSTS

B.1 LISTING OF CLAUSES INCORPORATED BY REFERENCE

NOTICE: The following contract clauses pertinent to this section are hereby incorporated by reference:

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

CLAUSE NUMBER	DATE	TITLE
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None included by reference.

II. NASA FAR SUPPLEMENT (48 CFR CHAPTER 18) CLAUSES

CLAUSE NUMBER	DATE	TITLE
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None included by reference

(End-of-Clause)

B.2 ESTIMATED COST PLUS AWARD FEE

The contractor shall provide products and services that support International Space Station Program (ISSP) functions related to mission planning, mission integration, mission operations, International Partner Integration, Russian language and logistics services and Mission Safety in accordance with Section J-1, Statement of Work (SOW); Section J Data Requirements Descriptions (DRD's); and Section J Performance Metrics. Table B.2-1 total contract value broken down between Transition Period, Completion Form, Level-Of-Effort (LOE), and Indefinite Delivery/Indefinite Quantity (IDIQ). IDIQ data will be entered into the tables in this clause as they are negotiated and definitized, or otherwise changed. The contract value in Table B.2-1 will not include option values unless they are exercised and become an active part of the contract.

Note: The Offeror shall complete the tables in this clause as appropriate.

TABLE B.2-1 Total Contract Value

	Estimated Cost	Fee	Price
Transition Period	N/A	\$0.00	\$249,241
Completion-Form	\$39,612,011	\$2,475,751	\$42,087,762
LOE	\$22,941,640	\$1,433,853	\$24,375,493

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IDIQ	\$31,239,121	\$1,952,445	\$33,191,566
TOTAL	\$93,792,772	\$5,862,048	\$99,904,062

Tables B.2-2 thru B.2-8 provides contract value by contract year for broken down between completion form, LOE, and IDIQ.

TABLE B.2-2 Basic Period, First Contract Year Including Transition Period (11/01/03 through 9/30/04)

	Estimated Cost	Fee	Price
Transition Period	N/A	\$0.00	\$249,241
Completion Form	\$5,920,850	\$370,053	\$6,290,903
LOE	\$3,453,102	\$215,819	\$3,668,921
IDIQ	\$5,022,692	\$313,918	\$5,336,610
TOTAL	\$14,396,644	\$899,790	\$15,296,434

TABLE B.2-3 Basic Period, Second Contract Year (10/01/04 through 9/30/05)

	Estimated Cost	Fee	Price
Completion Form	\$8,104,108	\$506,507	\$8,610,615
LOE	\$4,697,073	\$293,567	\$4,990,640
IDIQ	\$6,281,159	\$392,572	\$6,673,731
TOTAL	\$19,082,340	\$1,192,646	\$20,274,986

TABLE B.2-4 Basic Period, Third Contract Year (10/01/05 through 9/30/06)

	Estimated Cost	Fee	Price
Completion Form	\$8,357,718	\$522,357	\$8,880,075
LOE	\$4,887,074	\$305,442	\$5,192,516
IDIQ	\$6,466,493	\$404,156	\$6,870,649
TOTAL	\$19,711,285	\$1,231,955	\$20,943,240

TABLE B.2-5 Basic Period, Fourth Contract Year (10/01/06 through 9/30/07)

	Estimated Cost	Fee	Price
Completion Form	\$8,469,340	\$529,334	\$8,998,674
LOE	\$4,988,492	\$311,781	\$5,300,273
IDIQ	\$6,644,797	\$415,300	\$7,060,097
TOTAL	\$20,102,629	\$1,256,414	\$21,359,043

TABLE B.2-6 Basic Period, Fifth Contract Year (10/01/07 through 9/30/08)

	Estimated Cost	Fee	Price
Completion Form	\$8,759,995	\$547,500	\$9,307,495
LOE	\$4,915,900	\$307,244	\$5,223,144
IDIQ	\$6,823,979	\$426,499	\$7,250,478
TOTAL	\$20,499,875	\$1,281,242	\$21,781,117

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TABLE B.2-7 Option 1, Sixth Contract Year (10/01/07 through 9/30/09), IF EXERCISED

	Estimated Cost	Fee	Price
Completion Form	\$8,939,898	\$558,744	\$9,498,642
LOE	\$5,051,095	\$315,693	\$5,366,789
IDIQ	\$7,014,088	\$438,381	\$7,452,469
TOTAL	\$21,005,082	\$1,312,818	\$22,317,899

TABLE B.2-8 Option 2, Seventh Contract Year (10/01/09 through 9/30/10), IF EXERCISED

	Estimated Cost	Fee	Price
Completion Form	\$9,152,230	\$572,014	\$9,724,244
LOE	\$5,190,691	\$324,418	\$5,515,109
IDIQ	\$7,222,872	\$451,430	\$7,674,302
TOTAL	\$21,565,793	\$1,347,862	\$22,913,655

(End-of-Clause)

B.3 INDEFINITE DELIVERY/INDEFINITE QUANTITY ITEMS

The Government may order Indefinite Delivery/Indefinite Quantity (IDIQ) services at any time after contract start, in accordance with the procedures set forth in Clause H.16 of this contract. The contractor shall provide engineering and technical skills in support of Government-led studies, analyses, new technology development projects and unforeseen hardware requirements. The tasks will be dynamic in nature and may be performed in a teaming arrangement with the Government or other contractors. The Government will define the overall requirements of each order, including intermediate and final deliverable end items, and decide the respective responsibilities of each organization participating in the effort.

The contractor shall utilize the fully burdened rates shown in Table B.3-1 through B.3-8 for pricing task orders. The contractor shall only accept task orders issued by the contracting officer. The total value of task orders issued under this contract shall not exceed a maximum of \$41 million. The minimum amount of IDIQ supplies and services ordered in total and paid for under this contract shall be \$1million. This amount includes both cost and fee.

Note: The Offeror shall complete the tables in this clause as appropriate.

Table B.3-1	RESERVED		
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Table B.3-2	Basic Period, First Contract Year (1/1/04 through 9/30/04)	Unit	Rate
	Interpreter 1 U.S.	Per hour	\$
	Interpreter 1 Russia	Per hour	\$
	Interpreter 2 U.S.	Per hour	\$
	Interpreter 2 Russia	Per hour	\$
	Interpreter 3 U.S.	Per hour	\$
	Interpreter 3 Russia	Per hour	\$

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	Translator 1 U.S.	Per hour	\$
	Translator 1 Russia	Per hour	\$
	Translator 2 U.S.	Per hour	\$
	Translator 2 Russia	Per hour	\$
	Translator 3 U.S.	Per hour	\$
	Translator 3 Russia	Per hour	\$
	Language Instructor U.S.	Per hour	\$
	Language Instructor Russia	Per hour	\$
	Rates to be applied to non-labor costs such as materials. Identify the rate and basis of application (e.g., G&A, Material Handling, etc.)	Indirect Rates	%
	1. Basis (Contractor fill in): 2. Basis (Contractor fill in): 3. Basis (Contractor fill in):		
	Maximum Fee -- % of total proposed cost for estimating purposes		

Table B.3-3	Basic Period, Second Contract Year (10/1/04 through 9/30/05)	Unit	Rate
	Interpreter 1 U.S.	Per hour	\$
	Interpreter 1 Russia	Per hour	\$
	Interpreter 2 U.S.	Per hour	\$
	Interpreter 2 Russia	Per hour	\$
	Interpreter 3 U.S.	Per hour	\$
	Interpreter 3 Russia	Per hour	\$
	Translator 1 U.S.	Per hour	\$
	Translator 1 Russia	Per hour	\$
	Translator 2 U.S.	Per hour	\$
	Translator 2 Russia	Per hour	\$
	Translator 3 U.S.	Per hour	\$
	Translator 3 Russia	Per hour	\$
	Language Instructor U.S.	Per hour	\$
	Language Instructor Russia	Per hour	\$
	Rates to be applied to non-labor costs such as materials. Identify the rate and basis of application (e.g., G&A, Material Handling, etc.)	Indirect Rates	%
	1. Basis (Contractor fill in): 2. Basis (Contractor fill in):		

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	3. Basis (Contractor fill in):		
	Maximum Fee -- % of total proposed cost for estimating purposes		

Table B.3-4	Basic Period, Third Contract Year (10/1/05 through 9/30/06)	Unit	Rate
	Interpreter 1 U.S.	Per hour	\$
	Interpreter 1 Russia	Per hour	\$
	Interpreter 2 U.S.	Per hour	\$
	Interpreter 2 Russia	Per hour	\$
	Interpreter 3 U.S.	Per hour	\$
	Interpreter 3 Russia	Per hour	\$
	Translator 1 U.S.	Per hour	\$
	Translator 1 Russia	Per hour	\$
	Translator 2 U.S.	Per hour	\$
	Translator 2 Russia	Per hour	\$
	Translator 3 U.S.	Per hour	\$
	Translator 3 Russia	Per hour	\$
	Language Instructor U.S.	Per hour	\$
	Language Instructor Russia	Per hour	\$
	Rates to be applied to non-labor costs such as materials. Identify the rate and basis of application (e.g., G&A, Material Handling, etc.)	Indirect Rates	%
	1. Basis (Contractor fill in): 2. Basis (Contractor fill in): 3. Basis (Contractor fill in):		
	Maximum Fee -- % of total proposed cost for estimating purposes		

Table B.3-5	Basic Period, Fourth Contract Year (10/1/06 through 9/30/07)	Unit	Price
	Interpreter 1 U.S.	Per hour	\$
	Interpreter 1 Russia	Per hour	\$
	Interpreter 2 U.S.	Per hour	\$
	Interpreter 2 Russia	Per hour	\$
	Interpreter 3 U.S.	Per hour	\$
	Interpreter 3 Russia	Per hour	\$
	Translator 1 U.S.	Per hour	\$
	Translator 1 Russia	Per hour	\$

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	Translator 2 U.S.	Per hour	\$
	Translator 2 Russia	Per hour	\$
	Translator 3 U.S.	Per hour	\$
	Translator 3 Russia	Per hour	\$
	Language Instructor U.S.	Per hour	\$
	Language Instructor Russia	Per hour	\$
	Rates to be applied to non-labor costs such as materials. Identify the rate and basis of application (e.g., G&A, Material Handling, etc.)	Indirect Rates	%
	1. Basis (Contractor fill in): 2. Basis (Contractor fill in): 3. Basis (Contractor fill in):		
	Maximum Fee -- % of total proposed cost for estimating purposes		

Table B.3-6	Basic Period, Fifth Contract Year (10/1/07 through 9/30/08)	Unit	Price
	Interpreter 1 U.S.	Per hour	\$
	Interpreter 1 Russia	Per hour	\$
	Interpreter 2 U.S.	Per hour	\$
	Interpreter 2 Russia	Per hour	\$
	Interpreter 3 U.S.	Per hour	\$
	Interpreter 3 Russia	Per hour	\$
	Translator 1 U.S.	Per hour	\$
	Translator 1 Russia	Per hour	\$
	Translator 2 U.S.	Per hour	\$
	Translator 2 Russia	Per hour	\$
	Translator 3 U.S.	Per hour	\$
	Translator 3 Russia	Per hour	\$
	Language Instructor U.S.	Per hour	\$
	Language Instructor Russia	Per hour	\$
	Rates to be applied to non-labor costs such as materials. Identify the rate and basis of application (e.g., G&A, Material Handling, etc.)	Indirect Rates	%
	1. Basis (Contractor fill in): 2. Basis (Contractor fill in): 3. Basis (Contractor fill in):		

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	Maximum Fee -- % of total proposed cost for estimating purposes		
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Table B.3-7	Option 1, Sixth Contract Year (10/1/08 through 9/30/09), IF EXERCISED	Unit	Price
	Interpreter 1 U.S.	Per hour	\$
	Interpreter 1 Russia	Per hour	\$
	Interpreter 2 U.S.	Per hour	\$
	Interpreter 2 Russia	Per hour	\$
	Interpreter 3 U.S.	Per hour	\$
	Interpreter 3 Russia	Per hour	\$
	Translator 1 U.S.	Per hour	\$
	Translator 1 Russia	Per hour	\$
	Translator 2 U.S.	Per hour	\$
	Translator 2 Russia	Per hour	\$
	Translator 3 U.S.	Per hour	\$
	Translator 3 Russia	Per hour	\$
	Language Instructor U.S.	Per hour	\$
	Language Instructor Russia	Per hour	\$
	Rates to be applied to non-labor costs such as materials. Identify the rate and basis of application (e.g., G&A, Material Handling, etc.)	Indirect Rates	%
	1. Basis (Contractor fill in): 2. Basis (Contractor fill in): 3. Basis (Contractor fill in):		
	Maximum Fee -- % of total proposed cost for estimating purposes		

Table B.3-8	Option 2, Seventh Contract Year (10/1/09 through 9/30/10), IF EXERCISED	Unit	Price
	Interpreter 1 U.S.	Per hour	\$
	Interpreter 1 Russia	Per hour	\$
	Interpreter 2 U.S.	Per hour	\$
	Interpreter 2 Russia	Per hour	\$
	Interpreter 3 U.S.	Per hour	\$

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	Interpreter 3 Russia	Per hour	\$28.26
	Translator 1 U.S.	Per hour	\$34.60
	Translator 1 Russia	Per hour	\$24.32
	Translator 2 U.S.	Per hour	\$43.90
	Translator 2 Russia	Per hour	\$27.40
	Translator 3 U.S.	Per hour	\$54.71
	Translator 3 Russia	Per hour	\$28.26
	Language Instructor U.S.	Per hour	\$48.29
	Language Instructor Russia	Per hour	\$20.47
	Rates to be applied to non-labor costs such as materials. Identify the rate and basis of application (e.g., G&A, Material Handling, etc.)	Indirect Rates	4.46%
	1. Basis (Contractor fill in): 2. Basis (Contractor fill in): 3. Basis (Contractor fill in):		
	Maximum Fee -- % of total proposed cost for estimating purposes		6.25%

(End-of-Clause)

B.4 RESERVED

B.5 CONTRACT FUNDING (NASA 1852.232-81)(JUN 1990)

- (a) For purposes of payment of cost, exclusive of fee, in accordance with the Limitation of Funds clause, the total amount allotted by the Government to this contract is \$1,118,750.

This allotment covers the following estimated period of performance: Transition Period from November 1, 2003 through December 31, 2003 and Contract Start from January 1, 2004 to January 31, 2004.

- (b) An additional amount of \$ \$31,250 is obligated under this contract for payment of fee.

(End-of-Clause)

[END OF SECTION]

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SECTION D

PACKAGING AND MARKING

D.1 LISTING OF CLAUSES INCORPORATED BY REFERENCE

NOTICE: The following contract clauses pertinent to this section are hereby incorporated by reference:

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

CLAUSE NUMBER	DATE	TITLE
------------------	------	-------

None included by reference.

II. NASA FAR SUPPLEMENT (48 CFR CHAPTER 18) CLAUSES

CLAUSE NUMBER	DATE	TITLE
------------------	------	-------

None included by reference

(End Of Clause)

D.2 PACKAGING, HANDLING, AND TRANSPORTATION (NASA 1852.211-70)
(JUN 2000)

(a) The contractor shall comply with NPG 6000.1E, "Requirements for Packaging, Handling, and Transportation for Aeronautical and Space Systems, Equipment, and Associated Components", dated April 26, 1999, as may be supplemented by the statement of work or specifications of this contract, for all items designated Class I, II, or III.

(b) The contractor's packaging, handling, and transportation may be used, in whole or in part, subject to the written approval of the Contracting Officer, provided (1) the contractor's procedures are not in conflict with any requirements of this contract, and (2) the requirements of this contract shall take precedence in the event of any conflict with the contractor's procedures.

(c) The contractor must place the requirements of this clause in all subcontracts for items that will become components of deliverable class I, II, or III items.

(End of clause)

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D.3 JSC MARKING INSTRUCTIONS

Transportation Officer, Building 421, NASA Johnson Space Center, 2101 NASA Parkway,
Houston, TX 77058-3696

In addition, special marks or ultimate consignment will be shown as:

Mark for:	Accountable Property Officer:	_____ {contractor fill in} _____
Mark with:	Purchase Request No.:	_____ {contractor fill in} _____
	Contract Number:	NNJ04AA02C
	For re-issue to:	_____ {contractor fill in} _____

(End of clause)

D.4 KSC 52.247-92 MARKING INSTRUCTIONS (NOV 2000)

Transportation Officer, NASA J-BOSC Warehouse, Building M6-744 Kennedy Space Center,
Florida 32899

In addition, special marks or ultimate consignee will be shown as:

Marked For:

Ultimate Consignee Code	_____ {contractor fill in} _____
Building #	_____ {contractor fill in} _____
Contract #	NNJ04AA02C

(End of clause)

[END OF SECTION]

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(SECTION F)

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SECTION F**DELIVERIES OR PERFORMANCE****F.1 LISTING OF CLAUSES INCORPORATED BY REFERENCE**

NOTICE: The following contract clauses pertinent to this section are hereby incorporated by reference:

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

CLAUSE NUMBER	DATE	TITLE
52.242-15	AUG 1989	STOP-WORK ORDER AND ALTERNATE I (APR 1984)

II. NASA FAR SUPPLEMENT (48 CFR CHAPTER 18) CLAUSES

CLAUSE NUMBER	DATE	TITLE
None		None

(End of Clause)

F.2 PERIOD OF PERFORMANCE

The period of performance for the level-of-effort work of this contract shall be the contract effective date through September 30, 2008.

(End of Clause)

F.3 COMPLETION OF WORK (JSC 52.211-95)(OCT 2001)

The completion-form work required under this contract, including submission of all reports, shall be completed on or before September 30, 2008.

(End of Clause)

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(SECTION F)

Mission Integration Contract

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F.4 PLACE OF PERFORMANCE

This contract may be performed at:

- (1) Johnson Space Center and the immediate surrounding geographical area
- (2) John F. Kennedy Space Center and the immediate surrounding geographical area
- (3) Other work locations in and outside the United States, including Russia, in support of the statement of work requirements.

(End of clause)

F.5 OPTION TO EXTEND COMPLETION DATE (JSC 52.217-90) (OCT 1996)

The Government may require the contractor to continue to perform services under this contract. The Contracting Officer may exercise this option by issuance of a unilateral contract modification 30 days or more before the end of the period of performance and completion of work set forth in Articles F.2 and F.3. Should an option be exercised, the resultant contract will include all terms and conditions of the basic contract as it exists immediately prior to the exercise of the option, except for the following changes:

Note: The blanks in this clause are to be completed by the Contractor as appropriate.

OPTION 1

A. B.2 entitled "Cost Plus Award Fee", Table B.2-1 shall be modified to reflect the addition of \$8,923,919 to the estimated cost and \$557,745 to the maximum award fee for completion form services; an addition of \$5,050,077 to the estimated cost and \$315,630 to the maximum award fee for LOE services. The total addition to estimated cost and maximum award fee is \$14,847,371

B. B.3 entitled "Indefinite Delivery/Indefinite Quantity Items" shall be modified to reflect the addition of \$7,461,570 to the maximum order limit for services and products.

C. F.2 entitled "Period of Performance" shall be modified to extend the period of performance to September 30, 2009.

D. F.3 entitled "Completion of Work" shall be modified to extend the ending date of the contract to September 30, 2009.

E. H.5 entitled "Level-of-Effort (Cost)" shall be modified by increasing the total direct labor hours by 113,258 hours.

OPTION 2

A. B.2 entitled "Cost Plus Award Fee", Table B.2-1 shall be modified to reflect the addition of \$9,128,808 to the estimated cost and \$570,550 to the maximum award fee for completion form services; an addition of \$5,187,647 to the estimated cost and \$324,288 to the maximum award fee for LOE services. The total addition to estimated cost and maximum award fee is \$15,211,293.

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B. B.3 entitled "Indefinite Delivery/Indefinite Quantity Items" shall be modified to reflect the addition of \$7,683,589 to the maximum order limit for services and products.

C. F.2 entitled "Period of Performance" shall be modified to extend the period of performance to September 30, 2010.

D. F.3 entitled "Completion of Work" shall be modified to extend the ending date of the contract to September 30, 2010.

E. H.5 entitled "Level-of-Effort (Cost)" shall be modified by increasing the total direct labor hours by 113,258 hours.

(End of Clause)

F.6 OPTION FOR THE INCREMENTAL INCREASE OF EFFORT REQUIRED DURING CONTRACT PERFORMANCE (JSC 52.217-91) (JAN 1990)

Options 3 through 9 (Flex Options)

The Government may increase the number of LOE hours required to be furnished during any individual 1-year period, or the first period which is nine months, of performance by an amount ranging from 1 to 28,000 labor-hours. If the Government elects to exercise its option to increase the number of labor-hours to be furnished, the contractor will be so notified by a contract modification executed by the contracting officer. The terms and conditions relating to the Government's option rights as provided herein are as follows:

Note: The blanks in this clause are to be completed by the Contractor as appropriate.

(a) The Government may increase the labor-hours to be furnished (up to the maximum amount specified) by the exercise of one option, or by the exercise of multiple options, during any 1-year period, or the first 9 month period of performance.

(b) If the Government exercises one or more options pursuant to this provision, the estimated cost and fee values will be increased as follows:

(i) (Option 3) For options exercised during contract year 1, which is 9 months, (January 1, 2004 through September 30, 2004), the estimated cost and award fee will be increased by \$39.66 and \$2.48, respectively, for every hour ordered by the exercise of an option.

(ii) (Option 4) For options exercised during contract year 2, (October 1, 2004 through September 30, 2005), the estimated cost and award fee will be increased by \$40.47 and \$2.53, respectively, for every hour ordered by the exercise of an option.

(iii) (Option 5) For options exercised during contract year 3, (October 1, 2005 through September 30, 2006), the estimated cost and award fee will be increased by \$41.77 and \$2.61, respectively, for every hour ordered by the exercise of an option.

(iv) (Option 6) For options exercised during contract year 4, (October 1, 2006 through September 30, 2007), the estimated cost and award fee will be increased by \$42.64 and \$45.30, respectively, for every hour ordered by the exercise of an option.

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(v) (Option 7) For options exercised during contract year 5, (October 1, 2007 through September 30, 2008), the estimated cost and award fee will be increased by \$43.40 and \$2.71, respectively, for every hour ordered by the exercise of an option.

(vi) (Option 8) For options exercised during contract year 6, (October 1, 2008 through September 30, 2009), the estimated cost and award fee will be increased by \$44.59 and \$2.79, respectively, for every hour ordered by the exercise of an option.

(vii) (Option 9) For options exercised during contract year 7, (October 1, 2009 through September 30, 2010), the estimated cost and award fee will be increased by \$45.80 and \$2.86, respectively, for every hour ordered by the exercise of an option.

(c) The total direct labor hours identified in H.5 will be increased by the amount specified by the contracting officer in the contract amendment affecting the exercise of the option.

(End of clause)

F.7 SHIPPING INSTRUCTIONS (JSC 52.247-94) (APR 1997)

All documentation shall be shipped to the addresses cited in Section J, Attachment 2, Data Requirements List – Data Requirements Document.

Unless otherwise specified in the Service Request, shipment of all other items shall be as follows:

Parcel Post Shipments and Freight Shipments

Ship to:	Transportation Officer, Building 421 NASA Johnson Space Center 2101 NASA Parkway Houston, TX 77058-3696
Mark for:	Accountable Property Officer
Mark with:	Purchase Request No. TBD
Contract Number:	NNJ04AA02C
For reissue to:	TBD

Deleted: NAS9-03003

(End of clause)

F.8 BILLS OF LADING (NASA 1852.247-73) (JUNE 2002)

The purpose of this clause is to define when a commercial bill of lading or a government bill of lading is to be used when shipments of deliverable items under this contract are f.o.b. origin.

(a) **Commercial Bills of Lading.** All domestic shipments shall be made via commercial bills of lading (CBLs). The Contractor shall prepay domestic transportation charges. The Government shall reimburse the Contractor for these charges if they are added to the invoice as a separate line item supported by the paid freight receipts. If paid receipts in support of the invoice are not obtainable, a statement as described below must be completed, signed by an authorized company representative, and attached to the invoice.

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"I certify that the shipments identified below have been made, transportation charges have been paid by (company name), and paid freight or comparable receipts are not obtainable.

Contract or Order Number: _____
Destination: _____".

(b) Government Bills of Lading.

(1) International (export) and domestic overseas shipments of items deliverable under this contract shall be made by Government bills of lading (GBLs). As used in this clause, "domestic overseas" means non-continental United States, i.e. Hawaii, Commonwealth of Puerto Rico, and possessions of the United States.

(2) At least 15 days before shipment, the Contractor shall request in writing GBLs from: _____ [Insert name, title, and mailing address of designated transportation officer or other official delegated responsibility for GBLs]. If time is limited, requests may be by telephone: _____ [Insert appropriate telephone number]. Requests for GBLs shall include the following information.

- (i) Item identification/ description.
- (ii) Origin and destination.
- (iii) Individual and total weights.
- (iv) Dimensional Weight.
- (v) Dimensions and total cubic footage.
- (vi) Total number of pieces.
- (vii) Total dollar value.
- (viii) Other pertinent data.

(End of clause)

[END OF SECTION]

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F.4 PLACE OF PERFORMANCE

This contract may be performed at:

- (1) Johnson Space Center and the immediate surrounding geographical area
- (2) John F. Kennedy Space Center and the immediate surrounding geographical area
- (3) Other work locations in and outside the United States, including Russia, in support of the statement of work requirements.

(End of clause)

F.5 OPTION TO EXTEND COMPLETION DATE (JSC 52.217-90) (OCT 1996)

The Government may require the contractor to continue to perform services under this contract. The Contracting Officer may exercise this option by issuance of a unilateral contract modification 30 days or more before the end of the period of performance and completion of work set forth in Articles F.2 and F.3. Should an option be exercised, the resultant contract will include all terms and conditions of the basic contract as it exists immediately prior to the exercise of the option, except for the following changes:

OPTION 1

A. B.2 entitled "Cost Plus Award Fee", Table B.2-1 shall be modified to reflect the addition of \$8,939,998 to the estimated cost and \$558,750 to the maximum award fee for completion form services; an addition of \$5,051,123 to the estimated cost and \$315,695 to the maximum award fee for LOE services. The total addition to estimated cost and maximum award fee is \$14,865,566.

B. B.3 entitled "Indefinite Delivery/Indefinite Quantity Items" shall be modified to reflect the addition of \$7,452,469 to the maximum order limit for services and products.

C. F.2 entitled "Period of Performance" shall be modified to extend the period of performance to September 30, 2009.

D. F.3 entitled "Completion of Work" shall be modified to extend the ending date of the contract to September 30, 2009.

E. H.5 entitled "Level-of-Effort (Cost)" shall be modified by increasing the total direct labor hours by 109,000 hours.

OPTION 2

A. B.2 entitled "Cost Plus Award Fee", Table B.2-1 shall be modified to reflect the addition of \$9,152,230 to the estimated cost and \$572,014 to the maximum award fee for completion form services; an addition of \$5,190,691 to the estimated cost and \$324,418 to the maximum award fee for LOE services. The total addition to estimated cost and maximum award fee is \$15,239,353.

B. B.3 entitled "Indefinite Delivery/Indefinite Quantity Items" shall be modified to reflect the addition of \$7,674,302 to the maximum order limit for services and products.

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C. F.2 entitled "Period of Performance" shall be modified to extend the period of performance to September 30, 2010.

D. F.3 entitled "Completion of Work" shall be modified to extend the ending date of the contract to September 30, 2010.

E. H.5 entitled "Level-of-Effort (Cost)" shall be modified by increasing the total direct labor hours by 109,000 hours.

(End of Clause)

F.6 OPTION FOR THE INCREMENTAL INCREASE OF EFFORT REQUIRED DURING CONTRACT PERFORMANCE (JSC 52.217-91) (JAN 1990)

Options 3 through 9 (Flex Options)

The Government may increase the number of LOE hours required to be furnished during any individual 1-year period, or the first period which is nine months, of performance by an amount ranging from 1 to 28,000 labor-hours. If the Government elects to exercise its option to increase the number of labor-hours to be furnished, the contractor will be so notified by a contract modification executed by the contracting officer. The terms and conditions relating to the Government's option rights as provided herein are as follows:

Note: The blanks in this clause are to be completed by the Contractor as appropriate.

(a) The Government may increase the labor-hours to be furnished (up to the maximum amount specified) by the exercise of one option, or by the exercise of multiple options, during any 1-year period, or the first 9 month period of performance.

(b) If the Government exercises one or more options pursuant to this provision, the estimated cost and fee values will be increased as follows:

(i) (Option 3) For options exercised during contract year 1, which is 9 months, (January 1, 2004 through September 30, 2004), the estimated cost and award fee will be increased by \$39.66 and \$2.48, respectively, for every hour ordered by the exercise of an option.

(ii) (Option 4) For options exercised during contract year 2, (October 1, 2004 through September 30, 2005), the estimated cost and award fee will be increased by \$40.48 and \$2.53, respectively, for every hour ordered by the exercise of an option.

(iii) (Option 5) For options exercised during contract year 3, (October 1, 2005 through September 30, 2006), the estimated cost and award fee will be increased by \$41.78 and \$2.61, respectively, for every hour ordered by the exercise of an option.

(iv) (Option 6) For options exercised during contract year 4, (October 1, 2006 through September 30, 2007), the estimated cost and award fee will be increased by \$42.65 and \$2.67, respectively, for every hour ordered by the exercise of an option.

(v) (Option 7) For options exercised during contract year 5, (October 1, 2007 through September 30, 2008), the estimated cost and award fee will be increased by \$43.40 and \$2.71, respectively, for every hour ordered by the exercise of an option.

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(vi) (Option 8) For options exercised during contract year 6, (October 1, 2008 through September 30, 2009), the estimated cost and award fee will be increased by \$44.60 and \$2.79, respectively, for every hour ordered by the exercise of an option.

(vii) (Option 9) For options exercised during contract year 7, (October 1, 2009 through September 30, 2010), the estimated cost and award fee will be increased by \$45.83 and \$2.86, respectively, for every hour ordered by the exercise of an option.

(c) The total direct labor hours identified in H.5 will be increased by the amount specified by the contracting officer in the contract amendment affecting the exercise of the option.

(End of clause)

F.7 SHIPPING INSTRUCTIONS (JSC 52.247-94) (APR 1997)

All documentation shall be shipped to the addresses cited in Section J, Attachment 2, Data Requirements List – Data Requirements Document.

Unless otherwise specified in the Service Request, shipment of all other items shall be as follows:

Parcel Post Shipments and Freight Shipments

Ship to:	Transportation Officer, Building 421 NASA Johnson Space Center 2101 NASA Parkway Houston, TX 77058-3696
Mark for:	Accountable Property Officer
Mark with:	Purchase Request No. TBD
Contract Number:	NNJ04AA02C
For reissue to:	TBD

(End of clause)

F.8 BILLS OF LADING (NASA 1852.247-73) (JUNE 2002)

The purpose of this clause is to define when a commercial bill of lading or a government bill of lading is to be used when shipments of deliverable items under this contract are f.o.b. origin.

(a) **Commercial Bills of Lading.** All domestic shipments shall be made via commercial bills of lading (CBLs). The Contractor shall prepay domestic transportation charges. The Government shall reimburse the Contractor for these charges if they are added to the invoice as a separate line item supported by the paid freight receipts. If paid receipts in support of the invoice are not obtainable, a statement as described below must be completed, signed by an authorized company representative, and attached to the invoice.

"I certify that the shipments identified below have been made, transportation charges have been paid by (company name), and paid freight or comparable receipts are not obtainable.

Contract or Order Number: _____

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Destination:_____".

(b) Government Bills of Lading.

(1) International (export) and domestic overseas shipments of items deliverable under this contract shall be made by Government bills of lading (GBLs). As used in this clause, "domestic overseas" means non-continental United States, i.e. Hawaii, Commonwealth of Puerto Rico, and possessions of the United States.

(2) At least 15 days before shipment, the Contractor shall request in writing GBLs from: _____ [Insert name, title, and mailing address of designated transportation officer or other official delegated responsibility for GBLs]. If time is limited, requests may be by telephone: _____ [Insert appropriate telephone number]. Requests for GBLs shall include the following information.

- (i) Item identification/ description.
- (ii) Origin and destination.
- (iii) Individual and total weights.
- (iv) Dimensional Weight.
- (v) Dimensions and total cubic footage.
- (vi) Total number of pieces.
- (vii) Total dollar value.
- (viii) Other pertinent data.

(End of clause)

[END OF SECTION]

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SECTION G

CONTRACT ADMINISTRATION DATA

G.1 LISTING OF CLAUSES INCORPORATED BY REFERENCE

NOTICE: The following contract clauses pertinent to this section are hereby incorporated by reference:

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

CLAUSE NUMBER	DATE	TITLE
52.227-11	JUN 1997	PATENT RIGHTS – RETENTION BY THE CONTRACTOR (SHORT FORM) AS MODIFIED BY NASA FAR SUPPLEMENT 1852.227-11

II. NASA FAR SUPPLEMENT (48 CFR CHAPTER 18) CLAUSES

CLAUSE NUMBER	DATE	TITLE
1852.227-11		PATENT RIGHTS – RETENTION BY THE CONTRACTOR (SHORT FORM)
1852.242-73	JUL 2000	NASA CONTRACTOR FINANCIAL MANAGEMENT REPORTING
1852.245-70	JUL 1997	CONTRACTOR REQUESTS FOR GOVERNMENT OWNED EQUIPMENT
1852.245-73	AUG 2001	FINANCIAL REPORTING OF NASA PROPERTY IN THE CUSTODY OF CONTRACTORS

(End Of Clause)

G.2 AWARD FEE FOR SERVICE CONTRACTS (NASA 1852.216-76) (JUN 2000)

(a) The contractor can earn award fee from a minimum of zero dollars to the maximum stated in clause B.2 "Cost Plus Award Fee," in this contract.

(b) Beginning 6 months after the effective date of this contract, the Government shall evaluate the contractor's performance every 6 months to determine the amount of award fee earned by the contractor during the period. The contractor may submit a self-evaluation of performance for each evaluation period under consideration. These self-evaluations will be considered by the Government in its evaluation. The Government's Fee Determination Official (FDO) will determine the award fee amounts based on the contractor's performance in accordance with the Award Fee Plan in Section J, Attachment J-4. The plan may be revised unilaterally by the Government prior to the beginning of any rating period to redirect emphasis.

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(c) The Government will advise the contractor in writing of the evaluation results. The Contracting Officer will issue a unilateral modification to the contract that will recognize the award fee earned. The contractor is not required to submit a separate voucher for earned award fee. The NASA/JSC Financial Services Branch, mail code LF2, will make payment based on the unilateral modification.

(d) After 85 percent of the potential award fee has been paid, the Contracting Officer may direct the withholding of further payment of award fee until a reserve is set aside in an amount that the Contracting Officer considers necessary to protect the Government's interest. This reserve shall not exceed 15 percent of the total potential award fee.

(e) The amount of award fee which can be awarded in each evaluation period is limited to the amounts set forth in Attachment J-4 Award Fee Plan. Award fee which is not earned in an evaluation period cannot be reallocated to future evaluation periods.

- (f) (1) Provisional award fee payments will be made under this contract pending the determination of the amount of fee earned for an evaluation period. If applicable, provisional award fee payments will be made to the contractor on a monthly basis. The total amount of award fee available in an evaluation period that will be provisionally paid is the lesser of 70 percent or the prior period's evaluation score.
- (2) Provisional award fee payments will be superseded by the final award fee evaluation for that period. If provisional payments exceed the final evaluation score, the contractor will either credit the next payment voucher for the amount of such overpayment or refund the difference to the Government, as directed by the Contracting Officer.
- (3) If the Contracting Officer determines that the contractor will not achieve a level of performance commensurate with the provisional rate, payment of provisional award fee will be discontinued or reduced in such amounts as the Contracting Officer deems appropriate. The Contracting Officer will notify the contractor in writing if it is determined that such discontinuance or reduction is appropriate.
- (4) Provisional award fee payments will be made prior to the first award fee determination by the Government.

(g) Award fee determinations are unilateral decisions made solely at the discretion of the Government.

(End of clause)

G.3 SUBMISSION OF VOUCHERS FOR PAYMENT (NASA 1852.216-87)
(MAR 1998)

(a) The designated billing office for cost vouchers for purposes of the Prompt Payment clause of this contract is indicated below. Public vouchers for payment of costs shall include a reference to this contract, NNJ04AA02C.

- (b) (1) If the contractor is authorized to submit interim cost vouchers directly to the NASA paying office, the original voucher should be submitted to:

NASA Lyndon B. Johnson Space Center
LF2/Financial Management (Payables)
2101 NASA Parkway

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Houston, TX 77058-3696

- (2) For any period that the Defense Contract Audit Agency has authorized the contractor to submit interim cost vouchers directly to the Government paying office, interim vouchers are not required to be sent to the Auditor, and are considered to be provisionally approved for payment, subject to final audit.
- (3) Copies of vouchers should be submitted as directed by the Contracting Officer.
- (c) If the contractor is not authorized to submit interim cost vouchers directly to the paying office as described in paragraph (b), the contractor shall prepare and submit vouchers as follows:
- (1) One original Standard Form (SF) 1034, SF 1035, or equivalent contractor's attachment to: DCAA Houston Branch
8876 Gulf Freeway, Suite 500
Houston, Texas 77017-8544
 - (2) Five copies of SF 1034, SF 1035A, or equivalent contractor's attachment to the following offices by insertion in the memorandum block of their names and addresses:
 - (i) Copy 1 NASA Contracting Officer
 - (ii) Copy 2 Auditor
 - (iii) Copy 3 Contractor
 - (iv) Copy 4 Contract administration office; and
 - (v) Copy 5 Project management office.
 - (3) The Contracting Officer may designate other recipients as required.
- (d) Public vouchers for payment of fee shall be prepared similarly to the procedures in paragraphs (b) or (c) of this clause, whichever is applicable, and forwarded to:
- NASA Lyndon B. Johnson Space Center
BG/Contracting Officer
2101 NASA Parkway
Houston, TX 77058
- This is the designated billing office for fee vouchers for purposes of the Prompt Payment clause of this contract.
- (e) In the event that amounts are withheld from payment in accordance with provisions of this contract, a separate voucher for the amount withheld will be required before payment for that amount may be made.
- (End of clause)

G.4 TECHNICAL DIRECTION (NASA 1852.242-70)(SEP 1993)

- (a) Performance of the work under this contract is subject to the written technical direction of the Contracting Officer's Technical Representative (COTR), who shall be specifically appointed by the Contracting Officer in writing in accordance with NASA FAR Supplement 1842.270. "Technical direction" means a directive to the contractor that approves approaches, solutions, designs, or refinements; fills in details or otherwise completes the general description of work or documentation items; shifts emphasis among work areas or tasks; or furnishes similar instruction

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to the contractor. Technical direction includes requiring studies and pursuit of certain lines of inquiry regarding matters within the general tasks and requirements in Attachment J-1 of this contract.

(b) The COTR does not have the authority to, and shall not, issue any instruction purporting to be technical direction that--

- (1) Constitutes an assignment of additional work outside the statement of work;
- (2) Constitutes a change as defined in the Changes clause;
- (3) Constitutes a basis for any increase or decrease in the award fee or the time required for contract performance;
- (4) Changes any of the expressed terms, conditions, or specifications of the contract;
or
- (5) Interferes with the contractor's rights to perform the terms and conditions of the contract.

(c) All technical direction shall be issued in writing by the COTR.

(d) The contractor shall proceed promptly with the performance of technical direction duly issued by the COTR in the manner prescribed by this clause and within the COTR's authority. If, in the contractor's opinion, any instruction or direction by the COTR falls within any of the categories defined in paragraph (b) above, the contractor shall not proceed but shall notify the Contracting Officer in writing within 5 working days after receiving it and shall request the Contracting Officer to take action as described in this clause. Upon receiving this notification, the Contracting Officer shall either issue an appropriate contract modification within a reasonable time or advise the contractor in writing within 30 days that the instruction or direction is:

- (1) Rescinded in its entirety; or
- (2) Within the requirements of the contract and does not constitute a change under the Changes clause of the contract, and that the contractor should proceed promptly with its performance.

(e) A failure of the contractor and contracting officer to agree that the instruction or direction is both within the scope of the contract and does not constitute a change under the changes clause, or a failure to agree upon the contract action to be taken with respect to the instruction or direction, shall be subject to the Disputes clause of this contract.

(f) Any action(s) taken by the contractor in response to any direction given by any person other than the Contracting Officer or the COTR shall be at the contractor's risk.

(End of clause)

G.5 SECURITY/BADGING REQUIREMENTS FOR FOREIGN NATIONAL VISITORS AND EMPLOYEES OF FOREIGN CONTRACTORS (JSC 52.204-91) (MAR 2002)

(a) An employee of a domestic Johnson Space Center (JSC) contractor or its subcontractor who is not a U.S. citizen (foreign national) may not be admitted to the JSC site for purposes of performing work without special arrangements. In addition, all employees or representatives of a foreign JSC contractor/subcontractor may not be admitted to the JSC site without special

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arrangements. For employees as described above, advance notice must be given to the Security Office of the host installation [JSC or White Sands Test Facility (WSTF)] at least 3 weeks prior to the scheduled need for access to the site so that instructions on obtaining access may be provided.

(b) All visit/badge requests for persons described in (a) above must be entered in the NASA Request for Request (RFR) and Foreign National Management System (NFMMS) for acceptance, review, concurrence and approval purposes. When an authorized company official requests a JSC or WSTF badge for site access, he/she is certifying that steps have been taken to ensure that its contractor or subcontractor employees, visitors, or representatives will not be given access to export-controlled or classified information for which they are not authorized. These individuals shall serve as the contractor's representative(s) in certifying that all visit/badge request forms are processed in accordance with JSC and WSTF security and export control procedures. No foreign national, representative, or resident alien contractor/subcontractor employee shall be granted access into JSC or WSTF until a completed RFR has been approved and processed through the NFMMS. Unescorted access will not be granted unless a favorable National Agency Check (NAC) has been completed by the JSC Security Office.

(c) The contractor agrees that it will not employ for the performance of work onsite at the JSC or WSTF any individuals who are not legally authorized to work in the United States. If the JSC or WSTF Industrial Security Specialist or the contracting officer has reason to believe that any employee of the contractor may not be legally authorized to work in the United States and/or on the contract, the contractor may be required to furnish copies of Form I-9 (Employment Eligibility Verification), U.S. Department of Labor Application for Alien Employment Certification, and any other type of employment authorization document.

The contractor agrees to provide the information requested by the JSC or WSTF Security Office in order to comply with NASA policy directives and guidelines related to foreign visits to NASA facilities so that (1) the visitor/employee/representative may be allowed access to JSC or other NASA Centers for performance of this contract, (2) required investigations can be conducted, and (3) required annual or revalidation reports can be submitted to NASA Headquarters. All requested information must be submitted in a timely manner in accordance with instructions provided by JSC or any other Center to be visited.

(End of clause)

**G.6 DESIGNATION OF NEW TECHNOLOGY REPRESENTATIVE AND
PATENT REPRESENTATIVE (NASA 1852.227-72) (JUL 1997)**

(a) For purposes of administration of the clause of this contract entitled "New Technology" or "Patent Rights -- Retention by the contractor (Short Form)", whichever is included, the following named representatives are hereby designated by the Contracting Officer to administer such clause:

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NEW TECHNOLOGY REPRESENTATIVE

New Tech Rep and Patent Rep HA/Technology Transfer & Commercialization Office NASA
Johnson Space Center, Houston, TX 77058

PATENT REPRESENTATIVE

New Tech Rep and Patent Rep HA/Technology Transfer & Commercialization Office NASA
Johnson Space Center, Houston, TX 77058

(b) Reports of reportable items, and disclosure of subject inventions, interim reports, final reports, utilization reports, and other reports required by the clause, as well as any correspondence with respect to such matters, should be directed to the New Technology Representative unless transmitted in response to correspondence or request from the Patent Representative. Inquires or requests regarding disposition of rights, election of rights, or related matters should be directed to the Patent Representative. This clause shall be included in any subcontract hereunder requiring a "New Technology" clause or "Patent Rights--Retention by the contractor (Short Form)" clause, unless otherwise authorized or directed by the Contracting Officer. The respective responsibilities and authorities of the above-named representatives are set forth in 1827.305-370 of the NASA FAR Supplement.

(End of clause)

G.7 UNDERSTANDING WITH RESPECT TO COST VARIATIONS
(JSC 52.232-93) (MAR 1989)

The estimated cost of this contract is based on cost estimates for a number of cost elements (e.g., direct labor, overhead, materials, travel). One or more of these estimates was made by the Government and provided to the contractor in the solicitation leading to this contract. The parties recognize that the contractor's obligation to perform tasks within the scope of the Statement of Work could result in actual contractor expenditures which are greater or less than the Government's estimates provided to the contractor for the related cost element. Should such be the case, the parties agree that there will be no adjustment to the fee provided for in this contract, nor to any other terms and conditions hereof, except the contract estimated cost, should that become necessary. Any such adjustment in estimated cost will be subject to the terms of the "Limitation of Cost" or "Limitation of Funds" clause hereof, whichever is applicable.

(End of clause)

G.8 IDENTIFICATION OF EMPLOYEES (JSC 52.242-92) (MAR 2002)

At all times while on Government property, the contractor, subcontractors, their employees and agents shall wear badges which will be issued by the NASA Badging & Visitor Control Office, located in Building 110 at the Johnson Space Center (JSC), or at the Main Gate at the White Sands Test Facility (WSTF). JSC employee badges will be issued only between the hours of

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7:30 a.m. to 4 p.m., Monday through Thursday, and 7:30 am to 12:00 pm on Friday. JSC visitor badges will be issued between the hours of 6 a.m. to 10 p.m., 7 days a week. WSTF employee badges will be issued only between the hours of 8 a.m. to 2 p.m., Monday through Friday. WSTF visitor badges will be issued on a 7-day a week, 24-hour a day basis. Resident aliens and foreign nationals/representatives shall be issued green foreign national badges .

Each individual who wears a badge shall be required to sign personally for the badge. The contractor shall be held accountable for issued badges and all other related items and must assure that they are returned to the NASA Badging & Visitor Control Offices upon completion of work under the contract in accordance with Security Management Directive (SMD) 500-15, "Security Termination Procedures." Failure to comply with the NASA contractor termination procedures upon completion of the work (e.g., return of badges, decals, keys, CAA cards, clearance terminations, JSC Public Key Infrastructure (PKI)/special program deletions, etc.) may result in final payment being delayed.

(End of clause)

G.9 INSTALLATION-ACCOUNTABLE GOVERNMENT PROPERTY
(NASA 1852.245-71) (JUNE 1998) (ALTERNATE I) (MAR 1989)

(a) The Government property described in the clause at G.10 (1852.245-77, List of Installation - Accountable Property and Services, shall be made available to the Contractor on a no-charge basis for use in performance of this contract. This property shall be utilized only within the physical confines of the NASA installation that provided the property. Under this clause, the Government retains accountability for, and title to, the property; and the Contractor assumes the following user responsibilities:

(b)(1) The official accountable recordkeeping, physical inventory, financial control, and reporting of the property subject to this clause shall be retained by the Government and accomplished by the installation Supply and Equipment Management Office (SEMO) and Financial Management Officer. If this contract provides for the contractor to acquire property, title to which will vest in the Government, the following additional procedures apply:

- (i) The contractor's purchase order shall require the vendor to deliver the property to the installation central receiving area.
- (ii) The contractor shall furnish a copy of each purchase order, prior to delivery by the vendor, to the installation central receiving area.
- (iii) The contractor shall establish a record of the property, as required by FAR 45.5 and 1845.5, and furnish to the Industrial Property Officer a DD Form 1149 Requisition and Invoice/Shipping Document (or installation equivalent) to transfer accountability to the Government within 5 working days after receipt of the property by the contractor. The contractor is accountable for all contractor-acquired property until the property is transferred to the Government's accountability.

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(iv) Contractor use of Government property at an off-site location and off-site subcontractor use require advance approval of the contracting officer and notification of the SEMO. The contractor shall assume accountability and financial reporting responsibility for such property. The contractor shall establish records and property control procedures and maintain the property in accordance with the requirements of FAR Part 45.5 until its return to the installation.

(2) After transfer of accountability to the Government, the contractor shall continue to maintain such internal records as are necessary to execute the user responsibilities identified in Paragraph A and document the acquisition, billing, and disposition of the property. These records and supporting documentation shall be made available, upon request, to the SEMO and any other authorized representatives of the contracting officer.

(3) The contractor shall not utilize the installation's central receiving facility for receipt of Contractor-acquired property. However, the Contractor shall provide listings suitable for establishing accountable records of all such property received, on a quarterly basis, to the Contracting Officer and the SEMO.

G.10 LIST OF INSTALLATION-ACCOUNTABLE PROPERTY AND SERVICES
(NASA 1852.245-77) (JULY 1997)

In accordance with the clause 1852.245-71, Installation - Accountable Government Property the Contractor is authorized use of the types of property and services listed below, to the extent they are available, in the performance of this contract within the physical borders of the installation which may include buildings and space owned or directly leased by NASA in close proximity to the installation, if so designated by the Contracting Officer.

(a) Office space, work area space, and utilities. Government telephones are available for official purposes only; pay telephones are available for contractor employees for unofficial calls.

(b) General - including office furniture as exists at contract start.

(1) Equipment to be made available is listed in Attachment J-I, Appendix D. The Government retains accountability for this property under the clause at G.9 1852.245-71, Installation-Accountable Government Property, regardless of its authorized location.

(2) If the contractor acquires property, title to which vests in the Government pursuant to other provisions of this contract, this property also shall become accountable to the Government upon its entry into Government records as required by the clause at G.9 1852.245-71, Installation-Accountable Government Property.

(c) Safety and fire protection for Contractor personnel and facilities.

(d) Installation service facilities:

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1. Audiovisual: Presentation services, sound services, Release Print Film Library, Film Repository, and loan of audiovisual equipment.

2. Automatic Data Processing (ADP) Services (onsite only): Generally, this includes access to large general-purpose computer systems, 225 workstations, and the accessing media; i.e., terminals, printers, data communications, and consultation and training in the use of said systems. Unless otherwise specified in the contract, this does not include providing computer systems or ADP services for the Contractor business management, accounting, and administrative functions as well as scanners for use with NASA-wide applications.

(End of clause)

G.11 TRAVEL OUTSIDE OF THE UNITED STATES (NASA 1852.242-71)
(DEC 1988)

(a) The Contracting Officer must authorize in advance and in writing travel to locations outside of the United States by contractor employees that is to be charged as a cost to this contract. This approval may be granted when the travel is necessary to the efforts required under the contract and it is otherwise in the best interest of NASA.

(b) The contractor shall submit requests to the Contracting Officer at least 48 hours (2 working days) in advance of the start of the travel.

(c) The contractor shall submit a travel report at the conclusion of the travel. The Contracting Officer's approval of the travel will specify the required contents and distribution of the travel report.

(End of clause)

G.12 GOVERNMENT FURNISHED SERVICES (KSC)

The government will furnish the following services to the contractor at KSC on a no-charge-for-use basis to the extent reasonably necessary for the contractor to fulfill its contractual obligations:

- Calibration Services
- Conference Room (Mission Briefing Room in the Operations & Checkout Bldg, Training Auditorium) audio/video set up support
- Electrical Service
- Emergency Medical Services
- Fire Protection Service
- Food Services (cafeteria, snack bars, vending machines)
- Hazardous Waste Disposal
- Heating, Ventilating, and Air Conditioning (HVAC) (in non-technical areas)
- Janitorial Services (excludes operational work areas)
- Kennedy Unified Dial-In Access (KUDA)
- Library Services
- Locksmith Services

- Mail Services
- NASA Equipment Management System (NEMS)
- NASA Malfunction Laboratory
- Occupational Health Services
- On-site Film Laboratory and Processing Service (must be approved/funded by SSP or ISSP)
- On-Site Office Copier Machines and Services
- On-site Passenger Bus Service
- On-site Work Space (See Section L.21)
- Pesticide Control
- Portable Support Services, as required, during Facility System outages (i.e. Chillers, Boilers)
- Potable Water Sampling
- Primary Power Distribution
- Printing/Micro-imaging at Central KSC Print Shop
- Security Services (badging, investigative and law enforcement tasks, perimeter control, payload escort, and O&M of electronic surveillance systems)
- Standards Laboratory
- Water and Sewage
- Weather Data and Forecasting
- Weights for proof loading

(End of clause)

G.13 SECURITY CONTROLS AT KSC (KSC 52.204-90) (NOV 2000)**A. Identification of Employees**

1) The contractor shall require each employee engaged on the work site to display NASA-furnished identification badges and special access badges at all times. The contractor shall obtain and submit badging request forms for each person employed or to be employed by the contractor under this contract. The contractor shall designate its own security and badging officials to act as points-of-contact for the KSC Security Office. Prior to proceeding with onsite performance, the contractor shall submit the following information to the Protective Services Branch, Code TA-E2, Kennedy Space Center:

- a. Contract number and location of work site(s)
- b. Contract commencement and completion dates
- c. Status as prime or subcontractor
- d. Names of designated security and badging officials

2) Identification and badging of employees shall be accomplished as soon as practicable after award of the contract. During performance of the contract, the contractor shall, upon termination of an employee, immediately deliver badges and/or passes issued to the employee to the NASA Security Office. It is agreed and understood that all NASA

Comment: 52.204-90
SECURITY CONTROLS AT KSC

USE: On-Site Contractors, excepting Construction projects (Construction projects use 52.204-93 or its Alternate I)

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identification badges/passes remain the property of NASA, and the Government reserves the right to invalidate such badges/passes at any time.

B. Access to Controlled Areas within KSC

1) Certain areas within KSC have been designated as Controlled Areas. These are normally surrounded by fencing and have an entrance gate monitored by a guard or monitoring device. Access into such areas is classified into "escorted" or "unescorted" access. For each employee for which the contractor desires to have unescorted access, the prescribed forms must be submitted to the responsible NASA Center Security Office. Due to the time required to process requests for unescorted access, the contractor is advised to complete and submit the required forms as soon as practicable after contract award. Within 14 working days after the receipt of the forms, the responsible NASA Center Security Office will determine whether the person is eligible for unescorted access.

2) The prime contractor is responsible for providing escort services for any of his employees and/or any subcontractor employees who are not eligible for unescorted access.

3) All requests for unescorted access by subcontractors will be submitted through the prime contractor for forwarding to the NASA Security Office.

(End of clause)

G.14 RIGHTS IN DATA-SPECIAL WORKS

The following sections of the Statement of Work and DRDs are subject to FAR clause 52.227-17 Rights in Data-Special Works:

1. 1.5.1.1 Translation
2. 1.5.1.4 Logistics
3. 4.1.1.5.1 Crew Provisioning Management
4. DRD-II-04 Student Records

All other data delivered or maintained in the performance of this contract are subject to FAR clause 52.227-14 Rights in Data-General.

(End of clause)

G.15 FINANCIAL REPORTING OF NASA PROPERTY IN THE CUSTODY OF CONTRACTORS (1852.245-73)(AUGUST 2001)

(a) The Contractor shall submit annually a NASA Form (NF) 1018, NASA Property in the Custody of Contractors, in accordance with the provisions of 1845.505-14, the instructions on the form, subpart 1845.71, and any supplemental instructions for the current reporting period issued by NASA.

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(b)(1) Subcontractor use of NF 1018 is not required by this clause; however, the Contractor shall include data on property in the possession of subcontractors in the annual NF 1018.

(2) The Contractor shall mail the original signed NF 1018 directly to the cognizant NASA Center Deputy Chief Financial Officer, Finance, unless the Contractor uses the NF 1018 Electronic Submission System (NESS) for report preparation and submission.

(3) One copy shall be submitted (through the Department of Defense (DOD) Property Administrator if contract administration has been delegated to DOD) to the following address: 2101 NASA Rd 1, JB3 Property & Equipment Branch, Houston, TX, 77058, unless the Contractor uses the NF 1018 Electronic Submission System (NESS) for report preparation and submission.

(c) The annual reporting period shall be from October 1 of each year through September 30 of the following year. The report shall be submitted in time to be received by October 31. The information contained in these reports is entered into the NASA accounting system to reflect current asset values for agency financial statement purposes. Therefore, it is essential that required reports be received no later than October 31. The Contracting Officer may, in NASA's interest, withhold payment until a reserve not exceeding \$25,000 or 5 percent of the amount of the contract, whichever is less, has been set aside, if the Contractor fails to submit annual NF 1018 reports in accordance with 1845.505-14 and any supplemental instructions for the current reporting period issued by NASA. Such reserve shall be withheld until the Contracting Officer has determined that the required reports have been received by NASA. The withholding of any amount or the subsequent payment thereof shall not be construed as a waiver of any Government right.

(d) A final report shall be submitted within 30 days after disposition of all property subject to reporting when the contract performance period is complete in accordance with (b)(1) through (3) of this clause.

(End of clause)

G.16 ADVANCED AGREEMENT ON PAYMENT OF TRANSITION COSTS

The Contractor shall be entitled to payment for the transition period (starting 60 days before the contract start date) in the Firm-Fixed Price amount of **\$249,241** as identified in TABLE B.2-1, Total Contract Value, to be received in payments as identified by the offeror. The offeror shall propose a payment plan based on their Transition Plan approach that includes at least two payments but not more than five payments and does not exceed the above Firm-Fixed Price. The proposed payment milestones and measurable criteria will replace the following example that is one suggested approach. Payment will be made based on the Contracting Officer concurrence that each milestone has been accomplished:

Milestone 1: Staffing

\$32,822

The successful offeror has hired all personnel proposed as *key* personnel and all of these personnel are performing transition work at the level proposed; and at least 90% of all personnel

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proposed to perform all contract requirements have provided written acceptance of firm job offers.

Milestone 2: ISS Applications Competency **\$18,740**

The successful offeror has operational competency with the following ISS Applications.

Reference: Attachment J-1, Appendix D, Table 1	Reference: Attachment J-1, Appendix I, Table 2
1. MIDAS	3. Crew Language Training Database
2. IDT	4. COSMOS
	5. IRMA
	6. CSD

Milestone 3: Major Subcontracts **\$1,087**

The successful offeror has major subcontracts in place and ready to perform contract requirements.

Milestone 4: Plans and Other Data Deliverables **\$170,456**

The successful offeror has completed and submitted the following plans and other Data Deliverables for NASA review and/or approval (per DRD):

B-CM-01, Configuration Management Plan
 B-EC-02, Export Control Plan
 B-IT-02, IT Security Plan & Reports.
 B-PC-01, NF533 M/Q Cost Reporting
 B-PM-01, MI Program Management Plan
 B-PM-06, Certification of Flight Readiness (CoFR) Plan
 B-PR-02, Wage/Salary and Fringe Benefit

Milestone 5: Accounting System **\$26,136**

The successful offeror has implemented an accounting system fully capable of accurately reporting projected and actual accrued cost and fee in accordance with DRD A-PC-01. This system must also enable the capability to submit proper invoices for payment of completed work.

(End of clause)

G.17 INDIRECT COST CEILINGS

Without otherwise affecting the applicability of the cost principles set forth in Part 31 of the Federal Acquisition Regulation, which are a part of this contract pursuant to the clause entitled

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"Allowable Cost and Payment," the following agreements are made as to contract ceilings and cost categorization:

Provisional and Ceiling Cost Rates

General and Administrative (G&A) Expense are subject to the provisional and ceiling rates set forth below. To prevent substantial over or under payment (except where ceiling is reached), the provisional billing rates may, at the discretion of the contracting officer, be revised, either upward or downward, and such revision shall be set forth in an amendment to this contract.

Costs attributable to a rate increment in excess of the established ceiling rates (shown above) shall be unallowable unless caused by a) compliance with new state or Federal legal requirements or b) depreciation of capital investment when that investment has contributed directly and substantial to increased productivity.

By way of example and not limitation, changes such as base or rate changes over time to specific items within an existing legal requirement such as Federal Insurance Compensation Act (FICA), Federal Unemployment Insurance (FUI) and State Unemployment Insurance (SUI) are not considered a "new legal requirement." If the contractor incurs costs in excess of the ceiling rates as a result of a) or b) above, and wishes to obtain reimbursement, they shall submit a proposal that sets forth, fully and completely, the facts and circumstances believed to be responsible for the incurrence of costs above the ceiling(s).

An equitable adjustment will be made in the contract ceiling(s) only if, and to the extent, that the contractor's proposal demonstrates that the costs incurred in excess of the ceilings were attributable to the circumstances described in a) or b). The contractor's rationale must demonstrate that the costs incurred in excess of the ceilings were not reasonably susceptible to being offset by reasonable and prudent reductions in indirect costs in other areas within the contractor's control. Any unallowable costs shall not be recovered under this or any other Government contract.

The base of application for computing the G&A rates (both provisional and ceiling) shall be total cost.

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The G&A cost pool is comprised of the following cost elements: executive management, corporate business development, and corporate financial and administrative functions. In addition to salaries, fringe benefits and corporate overhead allocation, the other costs included in this pool are other direct costs in support of indirect personnel, franchise taxes, bank charges, corporate insurance, facilities, and professional fees.

(End of clause)

[END OF SECTION]

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SECTION H

SPECIAL CONTRACT REQUIREMENTS

H.1 LISTING OF CLAUSES INCORPORATED BY REFERENCE

NOTICE: The following contract clauses pertinent to this section are hereby incorporated by reference:

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

CLAUSE NUMBER	DATE	TITLE
None	None	None

II. NASA FAR SUPPLEMENT (48 CFR CHAPTER 18) CLAUSES

CLAUSE NUMBER	DATE	TITLE
1852.204-74	OCT 2001	CENTRAL CONTRACTOR REGISTRATION
1852.208-81	OCT 2001	RESTRICTIONS ON PRINTING AND DUPLICATING
1852.223-70	APR 2002	SAFETY AND HEALTH
1852.223-73	APR 2002	SAFETY AND HEALTH PLAN
1852.223-75	FEB 2002	MAJOR BREACH OF SAFETY OR SECURITY
1852.225-70	FEB 2000	EXPORT LICENSES AND ALTERNATE I (FEB 2000) AND PARA (B) INSERT "JOHNSON SPACE CENTER AND KENNEDY SPACE CENTER"
1852.228-76	DEC 1994	CROSS-WAIVER OF LIABILITY FOR SPACE STATION ACTIVITIES
1852.242-72	AUG 1992	OBSERVANCE OF LEGAL HOLIDAYS ALTERNATE II (OCT 2000)
1852.244-70	APR 1985	GEOGRAPHIC PARTICIPATION IN THE AEROSPACE PROGRAM

(End Of Clause)

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H.2 REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS (JSC 52.209-90) (SEP 1988)

This contract incorporates Section K, Representations, Certifications, and Other Statements of Offerors, as set forth in the contractor's proposal in response to RFP #9-BG-79-2-78P dated September 8, 2003, by reference, with the same force and effect as if it were given in full text.

(End of clause)

H.3 KEY PERSONNEL AND FACILITIES (NASA 1852.235-71) (MARCH 1989)

(a) The personnel and/or facilities listed below (or specified in the contract Schedule) are considered essential to the work being performed under this contract. Before removing, replacing, or diverting any of the listed or specified personnel or facilities, the contractor shall (1) notify the Contracting Officer reasonably in advance, and (2) submit justification (including proposed substitutions) in sufficient detail to permit evaluation of the impact on this contract.

(b) The contractor shall make no diversion without the Contracting Officer's written consent; provided that the contractor Officer may ratify in writing the proposed change, and that ratification shall constitute the Contracting Officer's consent required by this clause.

(c) The list of personnel and/or facilities (shown below or as specified in the contract Schedule) may, with the consent of the contracting parties, be amended from time to time during the course of the contract to add or delete personnel and/or facilities.

List here the personnel and/or facilities considered essential:

(End of clause)

H.4 HANDLING OF DATA

It is anticipated that in the performance of this contract, the contractor may have access to and use NASA's sensitive financial, management, and technical data. The contractor agrees that it will not use, copy, or disclose this data, except as necessary for the performance of this contract and will not disclose this data to others without the written consent of the contracting officer or the contracting officer's authorized representative.

(End of clause)

H.5 LEVEL-OF-EFFORT (COST) (NASA 1852.216-85) (DEC 1991)

NOTE: This clause only applies to work described in Table J-1 of Attachment J-1, Statement of Work identified as LOE.

(a) During the term of the contract, the contractor is obligated to provide not less than 95 percent nor more than 105 percent of the following direct labor hours:

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Total Direct Labor Hours: 771,000

(b) "Direct labor hours" are those productive hours expended by contractor personnel performing work under this contract that are charged as direct labor under the contractor's established accounting policy and procedures. The term does not include sick leave, vacation leave, or any type of administrative leave but does include direct labor hours provided under level-of-effort subcontracts.

(c) Once the maximum number of direct labor hours is reached or the contract term has ended, the contractor's requirements under the contract are fulfilled, even though the specified work may not have been completed. The contractor is not authorized to exceed the maximum of the direct labor hours specified in paragraph (a) unless a bilateral contract modification is executed. Any estimated cost and fee(s) adjustments for any additional direct labor hours shall be based solely upon the quantity of additional hours being added to the maximum number of direct labor hours specified in this clause.

(d) The fee, if any, is based upon the furnishing of at least the specified minimum number of direct labor hours, including subcontract hours. If the contractor provides less than that specified minimum number of hours prior to expiration of the contract term, and the Government has not invoked its rights under the Termination clause of this contract to adjust the contract for such reduced effort, the Contracting Officer may unilaterally make an equitable downward adjustment to the contract fee. The downward adjustment in fee will be based upon the difference between the minimum direct labor hours specified under this clause and the amount of direct labor hours provided by the contractor. Prior to making such an adjustment, the Contracting Officer will request the contractor provide a written discussion of any extenuating circumstances (e.g., productivity improvements or reductions in contract scope) which contributed to the underrun. Any information provided by the contractor will be considered by the Contracting Officer in determining the amount of the downward adjustment in fee.

(End of clause)

H.6 (LIMITED) RELEASE OF CONTRACTOR CONFIDENTIAL BUSINESS INFORMATION (CBI) (JSC 52.227-91) (MAY 2002)

(a) NASA may find it necessary to release information submitted by the contractor pursuant to the provisions of this contract, to individuals not employed by NASA. Business information that would ordinarily be entitled to confidential treatment may be included in the information released to these individuals. Accordingly, by signature on this contract, the contractor hereby consents to a limited release of its Confidential Business Information (CBI).

(b) Possible circumstances where the Agency may release the contractor's CBI include the following:

(1) To other Agency contractors and subcontractors, and their employees tasked with assisting the Agency in handling and processing information and documents in the administration of Agency contracts, such as providing post-award audit support and specialized technical support to NASA.

(2) To NASA contractors and subcontractors, and their employees engaged in information systems analysis, development, operation, and maintenance, including performing data processing and management functions for the Agency.

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(c) NASA recognizes its obligation to protect the contractor from competitive harm that could result from the release of such information to a competitor. Except where otherwise provided by law, NASA will permit the limited release of CBI under subparagraphs (1) or (2) only pursuant to non-disclosure agreements signed by the assisting contractor or subcontractor, and their individual employees who may require access to the CBI to perform the assisting contract.

(d) NASA's responsibilities under the Freedom of Information Act are not affected by this clause.

(e) The contractor agrees to include this clause, including this paragraph (e), in all subcontracts at all levels awarded pursuant to this contract that require the furnishing of CBI by the subcontractor.

(End of clause)

H.7 ISS CONTRACT STRATEGY CONFLICT OF INTEREST AGREEMENT

(a) An organizational conflict of interest exists for this contract as it relates to the contracts awarded as part of the overall ISS Contract Strategy in that the contractor may be in a position to favor its own products or capabilities. Two of the six contracts to be awarded will be responsible for support to ISS Program Management. These two contracts are the Program Integration and Control contract and the ISS Mission Integration contract. The other four contracts to be awarded will be responsible for the overall implementation of these Program requirements. These four contracts are Cargo Mission, ISS Payload Integration/Payload Mission, USOS Acceptance and Sustaining. The intent of this clause is to prohibit a contractor from developing Program requirements in one of the aforementioned two contracts designed for "Support to ISS Program Management" and also implementing those requirements in one of the additional four contracts responsible for "ISS Program Implementation." Therefore, the contractor, by signing this contract, fully understands, agrees, and will comply with the following conditions:

(1) The contractor will not perform work as a prime for the following contracts: Cargo Mission, ISS Payload Integration/Payload Mission, and USOS Acceptance and ISS Vehicle Sustaining.

(2) The contractor will perform no more than 49% (total contract costs) of the work as a subcontractor under any of the contracts mentioned above in number 1.

(3) The contractor shall not, and will not, make the day-to-day program management decisions under any of the contracts set forth in number 1.

(b) If by the performance of this contract, or by any other means, the contractor believes they may violate any of these conditions above, the contractor shall notify the contracting officer in writing immediately.

(End of clause)

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H.8 ASSOCIATE CONTRACTOR AGREEMENT FOR ISS OPERATIONS AND UTILIZATION ACTIVITIES

(a) The success of the International Space Station (ISS) Program is dependent on the efforts of multiple contractors. The MIC contractor is a key participant. The other contracts of the key participating contractors are:

NAS9-03002	Program Integration and Control Contract (PI&C)
NAS9-03043	Cargo Mission Contract
Contract Number TBD	Extravehicular Activity (EVA) Systems Contract
NAS9-02099	Payload Integration Contract
NAS15-10000	USOS Acceptance and ISS Vehicle Sustaining Contract
NAS9-20000	Space Flight Operations Contract (SFOC)
Contract Number TBD	Flight Equipment Sustaining and Operations
ContractNAS10-02007	Checkout, Assembly, and Payload Processing Services (CAPPS)

Under the aforementioned contracts the contractors will provide the necessary technical, engineering and processing products and services required to develop, operate, maintain and utilize the International Space Station.

(b) In order to achieve efficient and effective implementation of the operation and utilization phase of the ISS, the contractor shall establish the means for coordination and exchange of information with associate contractors. The information to be exchanged shall be that required by the contractors in the execution of their respective contract requirements. The contractors are strongly encouraged to seek out and foster cooperative efforts that will benefit the ISS Program with increased safety, efficiency, and productivity.

(c) Given the unique role of this contract in developing, operating, maintaining and utilizing the ISS, the contractor will engage in cooperative relationships that facilitate effective management of the overall ISS effort. This joint cooperation will be evaluated as part of the contract award fee process, as defined in the Award Fee Plan for the contract. Successful performance will be determined by the Government's assessment of the overall and combined performance of the operation and utilization requirements in the contracts, as modified. This clause will be effective during the award fee period starting November 01, 2003.

(d) To ensure successful implementation and utilization of the ISS, the contractors shall establish formal guidelines to address coordination, cooperation and communication. All program elements shall work in a coordinated fashion. Each contractor shall establish the means for the exchange of such data as needed to keep other project elements fully informed.

(End of clause)

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H.9 DATA RIGHTS NOTICE

(a) Any proposal submitted during the course of contract performance must expressly identify any computer software or technical data that is to be provided with less than unlimited data rights. The contractor shall notify the contracting officer in writing prior to incorporating any item, component, subcomponent, process, or software, wherein the related technical data or computer software qualifies as limited rights data or restricted computer software in accordance with Alternate II and III of FAR 52.227-14 and NFS 1852.227-86. This notification does not apply to commercial off-the-shelf (shrink-wrapped) computer software, and corresponding documentation, that has a standard commercial license unless the software is to be incorporated as a subcomponent in a developmental effort.

(b) Technical data and computer software delivered shall not be marked with restrictive legends unless the Contracting Officer has given prior written consent.

(c) All license agreements shall be compliant with Federal laws, regulations and the terms and conditions of this contract and shall be transferable to the government upon completion of the contract without additional cost to the Government. One copy of the final negotiated license agreement shall be forwarded to the contracting officer within 30 days of agreement to ensure compliance.

(End of clause)

H.10 RESTRICTED RIGHTS NOTICE

(a) Alternate III of FAR 52.227-14, Rights in Data – General.

(1) Paragraph (b)(1) of Alternate III of FAR 52.227-14, Rights in Data – General, is hereby deleted and the following paragraph (b)(1) is substituted in lieu thereof:

(b)(1) Used or copied for use in or with multiple computers provided they are not used simultaneously, including use at any government installation to which such computers may be transferred.

(2) The following is added as paragraph (b)(7) of Alternate III of FAR 52.227-14:

(b)(7) Used on multiple computers for network applications.

(b) NASA FAR Supplement (NFS) 1852.227-86, Commercial Computer Software – Licensing.

(1) Paragraph (d)(2)(i) of NFS 1852.227-86, is hereby deleted and the following paragraph (d)(2)(i) is substituted in lieu thereof:

(d)(2)(i) Used or copied for use in or with multiple computers provided they are not used simultaneously, including use at any government installation to which such computers may be transferred.

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(2) The following is added as paragraph (d)(2)(v) of NFS 1852.227-86:

(d)(2)(v) Used on multiple computers for network applications.

(End of clause)

H.11 LIMITED RIGHTS DATA NOTICE

(a) Notwithstanding any other terms and conditions of this contract, the Government shall have the right to disclose technical data marked as limited rights data outside of the Government, without obtaining permission from the contractor, under the following circumstances:

(1) Use (except for manufacture) by support service contractors.

(2) Evaluation by non-government evaluators.

(3) Use (except for manufacture) by other contractors participating in the Government's program of which the specific contract is a part, for information and use in connection with the work performed under each contract.

(4) Emergency repair or overhaul work.

(5) Release to a foreign government, or instrumentality thereof, as the interests of the United States Government may require, for information or evaluation, or emergency repair or overhaul work by such government.

(b) Prior to disclosure, except in emergency circumstances as identified in paragraphs 4 and 5 above, the Government shall require the recipient to sign an agreement, provided by and acceptable to the contractor, to protect the data from unauthorized use and disclosure. The contractor shall provide a copy of the acceptable nondisclosure agreement to the contracting officer no later than 30 days after contract award.

(End of clause)

H.12 MANAGEMENT AND PROTECTION OF DATA OF THIRD PARTIES

(a) It is anticipated that the contractor may have access to, be furnished, use, or generate the following types of data (recorded information) in performance of this contract:

(1) Data of third parties bearing limited rights or restricted rights notices submitted either to NASA or directly to the contractor; or

(2) Other data of third parties, which NASA has agreed to handle under protective arrangements;

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(b) In order to protect the interests of the government and the interests of other owners of such data, the contractor agrees with respect to data in category 1 above, and with respect to any data in category 2 when so identified by the Contracting Officer, to:

(1) Use and disclose such data only to the extent necessary to perform the work required under this contract, with particular emphasis on restricting the data to employees having a “need to know”;

(2) Preclude disclosure of such data outside contractor’s organization performing work under this contract without written consent of the Contracting Officer. The contractor’s organization includes support contractors to the extent they are subject to the same requirements regarding protection of 3rd party data; and

(3) Return or dispose of such data as directed by the Contracting Officer or the furnishing third party owner when such data is no longer needed for contract performance.

(End of clause)

H.13 INFORMATION INCIDENTAL TO CONTRACT ADMINISTRATION

(a) With the exception of financial information, the Government shall have unlimited rights to use and distribute to third parties any administrative or management information developed by the contractor or a subcontractor at any tier in whole or in part for the performance of the contract or first produced in the performance of the contract, whether or not said information is specified as a contract deliverable, if created in whole or in part at Government expense. The contracting officer may, at any time during the contract performance or within a period 3 years after acceptance of all items to be delivered under this contract, order any administrative or management information developed by the contractor or a subcontractor at any tier in whole or in part for the performance of the contract or first produced in the performance of the contract.

(b) The contracting officer may release the contractor from the requirements of this clause for specifically identified information at any time during the 3-year period set forth in paragraph A of this clause.

(End of clause)

H.14 ACCESS TO CONTRACTOR DATA

(a) “Data” for purposes of this clause, means recorded information, regardless of the form or media on which it may be recorded. The term includes technical data; computer software; and information incidental to contract administration, such as financial, administrative, cost or pricing, or management information. Types of data contained in the definition also include contractor internal audits of any discipline, system, or task which directly or indirectly supports the performance of this contract as well as data from any audit of subcontractor(s) performing this contract. These examples are illustrative and are not to be construed as a limitation on the definition of data.

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(b) The contracting officer or designee shall, through closeout, have access to and the right to examine any of the data produced or specifically used in the performance of this contract. The purpose of this access provision is to permit the Government to monitor the contractor's performance under this contract and to permit sampling of contractor data to verify requirements compliance and continuous improvement without unduly increasing the number of data deliverables to this contract.

(c) The contractor shall make available at all reasonable times for Government inspection all existing Government data provided to the contractor and any data first produced or used in the performance of this contract for examination through closeout. Moreover, information provided by the contractor on this system shall contain all necessary technical and business application data to determine the degree to which contract requirements are met. At a minimum, the contractor shall maintain an index of data that is available on request. The index is a medium for identifying contract internal data which has been generated by the contractor in compliance with the work effort described in the SOW and other requirements.

(d) Except for software systems being provided as part of this contract, the contractor shall maintain all data on a commercially available system for information management that is easily accessible by NASA. For the purposes of this clause, "commercially available system" is defined as a system comprised of a Commercial Off-the-Shelf (COTS) database management system with its associated reporting/query tools, and a COTS text and graphics viewer software package. The contractor must obtain the approval of the Contracting Officer prior to using any noncommercial system for information management of data generated under this contract. As part of this request, the contractor must justify why no commercial system to manage information is adequate for this contract. If use of a noncommercial system is approved, then the contractor shall demonstrate the system to the Government and provide thorough training to Government personnel to ensure they are able to access (i.e., read and copy) all data maintained on the system.

(e) The contractor shall provide the Government unimpeded access to all areas determined by Government representatives as necessary for surveillance, audit and independent evaluation purposes. In those instances that access is restricted due to hazards or other personnel access limitations, the contractor shall accommodate Government personnel such that access is provided and operational safety is not compromised.

(f) Notwithstanding the *Additional Data Requirements* clause, the Government shall have the right to reproduce any data found during the examination that it wishes to retain. The Government will reimburse reproduction costs only when it uses contractor equipment for the reproduction. The Government shall retain no greater rights in the reproduced data than it would have under the *Rights in Data--General* clause.

(g) The contractor shall describe the areas of its internal systems where NASA access will be permitted, define access and interface requirements, and provide NASA the required training to be able to access and use these systems.

(h) The contractor shall flow this clause to all cost type subcontracts.

(End of clause)

H.15 ADDITIONAL EXPORT CONTROL REQUIREMENTS

In addition to the requirements set forth in NFS 1852.225-70 Export Licenses, the Contractor shall perform the following tasks.

1. The following requirements shall be met by the Contractor and its Subcontractors, respectively, to use Department of Commerce or Department of State export licenses obtained by NASA and to use any NASA export license exceptions or exemptions as they apply to the International Space Station Program.

For all program related exports, submit the equivalent information described below to the Center Export Administrator (CEA) at the geographically closest NASA Space Flight Center (Johnson Space Center (JSC), Marshall Space Flight Center (MSFC) or Kennedy Space Flight Center (MSFC)) according to the policies and procedures of that center. A courtesy copy of equivalent information submitted to MSFC or KSC shall be provided to the JSC CEA's office. Provide copies of shipping documents for shipments made under a NASA Export License, exemption or exception to the appropriate CEA within two weeks after the shipment.

- a. A minimum of 15 working days prior to export, the Contractor or its subcontractors who are exporting on behalf of NASA must obtain approval from the Center Export Administrator's (CEA) office by following an Advance Notification of Shipment (ANS) process.
- b. Before effecting an export on behalf of NASA, the Contractor or its subcontractors shall determine the classification recommendation of the item(s) or document(s) and whether it needs a license. If required, the contractor or its subcontractors shall provide a more technical rationale supporting the classification, if requested by NASA
- c. Formal letter, fax or email is sufficient, addressed to the CEA's office, and must include the details listed below.
 1. NASA license number (include date of expiration) or license exception/exception.
 2. Quantity and description as it appears on the applicable license.
 3. Date of planned shipment (and expected date of return if not a permanent export).
 4. Origin of shipment (Company and city).
 5. Destination of shipment (Country, city and company).
 6. Point of contact (for technical questions – must be a representative of the originating shipper).
 7. Export Classification Control Number (ECCN) or category under Export Administration Regulations or United States Munitions List regulations.

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8. Rationale for classification.
9. Requirement to export (i.e., MOU, contract number, meeting minutes). You may be asked to provide copy of the requirement.
10. Additional information as necessary to clarify the export.
 - d. A copy of the completed Pro Forma Invoice (JSC Form 1735) attached to an email is sufficient to meet this requirement as long as all required information above is also included.
 - e. After all the information is submitted, the CEA's office will respond to Contractor or its subcontractor within ten working days. Once approved, NASA will provide the destination control statement to use on all export documentation.
2. Included in the applicable export exceptions, the Contractor or its subcontractors are authorized to export hardware, software or data to ISS International Partner (IP) governmental offices that meet the conditions of license exception GOV (15 CFR 740.11(b)(2)(iii)(A)).
3. For Verification of End Use, Contractor or its subcontractors shipping on behalf of NASA using a license or license exception or exemption, shall provide a copy of all shipping documentation within two business weeks of the shipment date to the CEA's office.
4. For temporary exports, Contractor or its subcontractors shipping on behalf of NASA, shall notify the CEA in writing within five business days of the date that the item was actually returned.
5. The Contractor or its subcontractors shall keep those records required by Department of Commerce and Department of State regulations for all exports and make them available upon request to NASA and its representatives.
6. These requirements, do not apply to Contractor or subcontractor commercial contract related exports or exports pursuant to Technical Assistance Agreements or other license authorizations received by the Contractor or its subcontractors and for which the Contractor or its subcontractors will be the exporter of record.
7. The Contractor and its subcontractors shall perform self annual audits of their export control processes and provide written audit results to the CEA in accordance with DRD B-EC-01.
8. The Contractor and its subcontractors shall report to the NASA JSC EST, in writing, any potential export issues (including those related to support of sustaining engineering and operations of ISS) that cannot be resolved by the Contractor or its subcontractors, respectively. Such report and/or notification of issues and technical tasks should be reported to the NASA JSC EST at least three months in advance of requested action.

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9. Upon discovery of unforeseen adverse export issues, the Contractor shall immediately notify NASA JSC EST by telephone or email of said issue and shall report to the NASA JSC EST, in writing, as the facts become known.

10. When directed in writing by the Contracting Officer or designated representative, the Contractor shall export on behalf of NASA, NASA specifically identified technical data, computer software, hardware, or defense services to a named foreign entity or person, in the manner and under the conditions provided for in the direction.

(End of Clause)

H.16 TASK ORDERING PROCEDURE (NASA 1852.216-80) (OCT 1996)

(a) Only the contracting officer may issue task orders to the contractor, providing specific authorization or direction to perform work within the scope of the contract and as specified in the schedule. The contractor may incur costs under this contract in performance of task orders and task order modifications issued in accordance with this clause. No other costs are authorized unless otherwise specified in the contract or expressly authorized by the contracting officer.

(b) Prior to issuing a task order, the contracting officer shall provide the contractor with the following data:

(1) A functional description of the work identifying the objectives or results desired from the contemplated task order.

(2) Proposed performance standards to be used as criteria for determining whether the work requirements have been met.

(3) A request for a task plan from the contractor to include the technical approach, period of performance, appropriate cost information, and any other information required to determine the reasonableness of the contractor's proposal.

(c) Within 7 calendar days after receipt of the contracting officer's request, the contractor shall submit a task plan conforming to the request.

(d) After review and any necessary discussions, the contracting officer may issue a task order to the contractor containing, as a minimum, the following:

(1) Date of the order.

(2) Contract number and order number.

(3) Functional description of the work identifying the objectives or results desired from the task order, including special instructions or other information necessary for performance of the task.

(4) Performance standards, and where appropriate, quality assurance standards.

(5) Maximum dollar amount authorized (cost and fee or price). This includes allocation of award fee among award fee periods, if applicable.

(6) Any other resources (travel, materials, equipment, facilities, etc.) authorized.

(7) Delivery/performance schedule including start and end dates.

(8) If contract funding is by individual task order, accounting and appropriation data.

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- (e) The contractor shall provide acknowledgment of receipt to the contracting officer within **2** calendar days after receipt of the task order.
- (f) If time constraints do not permit issuance of a fully defined task order in accordance with the procedures described in paragraphs (a) through (d), a task order, which includes a ceiling price, may be issued.
- (g) The contracting officer may amend tasks in the same manner in which they were issued.
- (h) In the event of a conflict between the requirements of the task order and the contractor's approved task plan, the task order shall prevail.

(End of clause)

H.17 ADJUSTMENT FOR COMPLETION FORM

- (a) The provisions and references of this clause apply to the Completion Form Sections of the Statement of Work (SOW) as indicated per J-1, SOW Table 1. The purpose of this clause is to set forth the terms and conditions governing adjustments to the estimated cost and fee, if any, to account for growth or shrinkage in the work to be performed.
- (b) The Government's objective is to have the SOW performed in the most efficient manner possible, consistent with the furnishing of high quality services. One means of achieving this objective is to minimize changes, and thus reduce or eliminate the administrative costs to both parties that are caused by issuing, pricing, and negotiating changes. The contract adjustment provisions set forth herein are intended to achieve that objective, while at the same time compensating the contractor fairly for the furnishing of services that are within a reasonable range of the baseline work (including work load indicator data) projected to be performed under the contract.
- (c) Effort required in performance of the SOW shall be initiated via technical direction. All such technical direction shall be considered to fall within the baseline requirements of the contract. Except as provided in this clause, no technical direction shall give rise to an equitable adjustment in the estimated cost or fee, delivery schedule, or any other contract provision.
- (d) Adjustment Provisions
 - (1) The elements of the work described in the Completion Form Sections of the Statement of Work (SOW) as indicated per J-1, SOW Table 1 are in some instances accompanied by "workload indicator data." These data represent the Government's estimates of the level of services required, and are only intended to reflect the amount of activity anticipated for those elements of work. Workload indicator data do not constitute a limitation on the contractor's obligation to perform work in the areas to which they relate.

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- (2) Workload indicator data define the thresholds which must be met before the performance of work which exceeds or is less than the threshold may become the basis for a contract adjustment. Work performed under the contract which falls within a range of plus or minus 20 percent of the workload indicator data will not be subject to contract adjustment (unless an adjustment is necessitated by some other provision of this contract). The fact that the contractor has performed work that is 20 percent above the workload indicator data shall not relieve the contractor of its obligation to continue to perform such work to the extent it is required by the Government.
- (3) An equitable adjustment (either upwards or downwards) will be made in the cost and fee provided for in this contract if both the following conditions are met annually of each year of the contract:
- one or more of the workload sizing data thresholds has either been exceeded or has not been met by 20 percent; and
 - the net cost increase or decrease of all workload sizing data combined is greater than \$250,000.

The adjustment provisions of this clause shall not be construed as a limitation of the Government's rights under the Termination clause of this contract. In addition, this clause is fully subject to the Limitation of Funds clause of this contract and shall not be construed as authorization to perform work beyond what can be accomplished in accordance with the Limitation of Funds.

- (e) The contractor is responsible for: tracking the performance of work in each applicable Completion Form Sections of the Statement of Work (SOW) as indicated per J-1, SOW Table 1; keeping current, complete, and accurate records regarding the quantum or work performed in relation to the applicable SOW; making such records available to the contracting officer as may be requested from time to time; and submitting an adjustment proposal if the contractor believes the conditions of paragraph (d) above are met, or if requested by the contracting officer. If initiated by the contractor, the contractor's proposal shall be submitted within 90 days of the last day of the performance period under consideration. If requested by the contracting officer, the proposal shall be submitted within 90 days of the request.

H.18 RUSSIAN TRAVEL

The contractor shall comply with Management Directive, ISSP-MD-114 entitled "Guidelines for Travel to Russia and from Russia to Support Meetings". The Russian Element Team in the OC/Mission Integration and Operations Office is the approving authority for U.S. personnel traveling to Russia and Russian personnel traveling out of Russia.

(End of Clause)

H.19 GOVERNMENT INSIGHT

- (a) Definitions. For the purpose of this contract, the following definitions apply:

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“Insight,” as used in this clause, means technical visibility into the Program, maintained through audit, surveillance, assessment of trends and metrics, software independent verification and validation, the flight readiness review process, and review or independent assessment of out-of-family anomalies occurring in any phase of the program.

“Surveillance,” as used in this clause means continual monitoring and verification of the status of manufacturing, testing, and processing of Station hardware, software and operations preparations to ensure that requirements are being fulfilled. Items to be monitored and verified are selected—this is not an all inclusive activity.

“Audit,” as used in this clause, means the implementation of procedures and requirements of the NASA Engineering Quality Audit (NEQA) or other equivalent audit techniques used to perform periodic audit of all aspects of processes and procedures required to manufacture, assemble, test, and process hardware for flight. Audits may include an examination of all disciplines and tasks which are involved with or support ISS, hardware and software production and maintenance, safety and quality assurance, logistics, procurements and operations. These descriptions are illustrative only and shall not be construed as any limitation on the Government’s right to conduct an audit of the Contractor and subcontractors to determine performance on this contract.

(b) The Government shall have the right to audit the Contractor and subcontractors in accordance with applicable clauses within this contract. One purpose of these audits is to afford the Government insight into and understanding of Contractor and selected subcontractor processes and procedures to determine whether the processes or procedures (1) adversely affect safety; (2) are not within contract performance standards; or (3) adversely affect future launch schedules.

(c) The Government may schedule fact-finding meetings with the Contractor and subcontractors as necessary to discuss issues requiring Government insight. Scheduling and format of these meetings shall indicate whether exchange of information will be required, and the number and expertise of Contractor/subcontractor personnel who shall attend the meetings. When requested by the Contracting Officer or designee, the Contractor and subcontractors shall provide necessary support to the Government when it audits the Contractor or subcontractor and for the Government-Contractor/subcontractor meetings. The purpose of these meetings is to understand the findings of the Government audits. The parties understand and agree that no direction from the Government or constructive change to the contract shall result from any of these meetings.

(End of Clause)

H.20 REPROCUREMENT DATA PACKAGE

The contractor shall provide a Reprourement Data Package in accordance with DRD B-PR-03.

(End of Clause)

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PART II - CONTRACT CLAUSES

SECTION I

CONTRACT CLAUSES

I.1 LISTING OF CLAUSES INCORPORATED BY REFERENCE

NOTICE: The following contract clauses pertinent to this section are hereby incorporated by reference:

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

CLAUSE NUMBER	DATE	TITLE
52.202-1	DEC 2001	DEFINITIONS
52.203-3	APR 1984	GRATUITIES
52.203-5	APR 1984	COVENANT AGAINST CONTINGENT FEES
52.203-6	JUL 1995	RESTRICTION ON SUBCONTRACTOR SALES TO THE GOVERNMENT
52.203-7	JUL 1995	ANTI-KICKBACK PROCEDURES
52.203-8	JAN 1997	CANCELLATION, RECISION, AND RECOVERY OF FUNDS FOR ILLEGAL OR IMPROPER ACTIVITY
52.203-10	JAN 1997	PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY
52.203-12	JUN 2003	LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS
52.204-2	AUG 1996	SECURITY REQUIREMENT
52.204-4	AUG 2000	PRINTING OR COPIED DOUBLE-SIDED ON RECYCLED PAPER
52.209-6	JUL 1995	PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT
52.211-15	SEP 1990	DEFENSE PRIORITY AND ALLOCATION REQUESTS
52.215-2	JUN 1999	AUDIT AND RECORDS--NEGOTIATION
52.215-8	OCT 1997	ORDER OF PRECEDENCE-UNIFORM CONTRACT FORMAT
52.215-11	OCT 1997	PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA - MODIFICATIONS
52.215-13	OCT 1997	SUBCONTRACTING COST OR PRICING DATA - MODIFICATIONS
52.215-14	OCT 1997	INTEGRITY OF UNIT PRICES
52.215-15	DEC 1998	PENSION ADJUSTMENTS AND ASSET REVERSIONS
52.215-18	OCT 1997	REVERSION OR ADJUSTMENT OF PLANS FOR POSTRETIREMENT BENEFITS (PRB) OTHER THAN PENSIONS

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52.215-19	OCT 1997	NOTIFICATION OF OWNERSHIP CHANGES
52.215-21	OCT 1997	REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA – MODIFICATIONS
52.216-7	DEC 2002	ALLOWABLE COST AND PAYMENT
52.217-8	NOV 1999	OPTION TO EXTEND SERVICES
52.219-6	JUL 1996	NOTICE OF TOTAL SMALL BUSINESS SET-ASIDE
52.219-8	OCT 2000	UTILIZATION OF SMALL BUSINESS CONCERNS
52.219-14	DEC 1996	LIMITATIONS ON SUBCONTRACTING
52.222-1	FEB 1997	NOTICE TO THE GOVERNMENT OF LABOR DISPUTES
52.222-2	JUL 1990	PAYMENT FOR OVERTIME PREMIUMS
52.222-3	JUN 2003	CONVICT LABOR
52.222-21	FEB 1999	PROHIBITION OF SEGREGATED FACILITIES
52.222-26	APR 2002	EQUAL OPPORTUNITY
52.222-29	FEB 1999	NOTIFICATION OF VISA DENIAL
52.222-35	DEC 2001	EQUAL OPPORTUNITY FOR SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS
52.222-36	JUN 1998	AFFIRMATIVE ACTION FOR WORKERS WITH DISABILITIES
52.222-37	DEC 2001	EMPLOYMENT REPORTS ON SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS
52.222-41	MAY 1989	SERVICE CONTRACT ACT OF 1965 AS AMENDED
52.223-5	APR 1998	POLLUTION PREVENTION & RIGHT-TO-KNOW INFORMATION
52.223-6	MAY 2001	DRUG-FREE WORKPLACE
52.223-10	AUG 2000	WASTE REDUCTION PROGRAM
52.223-14	JUN 2003	TOXIC CHEMICAL RELEASE REPORTING
52.224-1	APR 1984	PRIVACY ACT NOTIFICATION
52.224-2	APR 1984	PRIVACY ACT
52.225-13	JUN 2003	RESTRICTIONS ON CERTAIN FOREIGN PURCHASES
52.227-1	JUL 1995	AUTHORIZATION AND CONSENT
52.227-2	AUG 1996	NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT
52.227-14	JUN 1987	RIGHTS IN DATA – GENERAL AND ALTERNATES II AND III
52.227-16	JUN 1987	ADDITIONAL DATA REQUIREMENTS
52.227-17	JUN 1987	RIGHTS IN DATA - SPECIAL WORKS AS MODIFIED BY NFS 1825.227-17
52.228-7	MAR 1996	INSURANCE--LIABILITY TO THIRD PERSONS
52.232-9	APR 1984	LIMITATION ON WITHHOLDING OF PAYMENTS
52.232-17	JUN 1996	INTEREST
52.232-18	APR 1984	AVAILABILITY OF FUNDS
52.232-22	APR 1984	LIMITATION OF FUNDS
52.232-23	JAN 1986	ASSIGNMENT OF CLAIMS
52.232-25	FEB 2002	PROMPT PAYMENT (ALTERNATE 1)
52.233-1	JUL 2002	DISPUTES (ALTERNATE I) (DEC 1991)
52.233-3	AUG 1996	PROTEST AFTER AWARD (ALTERNATE I)

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52.237-2	APR 1984	(JUN 1985) PROTECTION OF GOVERNMENT BUILDINGS, EQUIPMENT, AND VEGETATION
52.237-3	JAN 1991	CONTINUITY OF SERVICES
52.242-1	APR 1984	NOTICE OF INTENT TO DISALLOW COSTS
52.242-3	MAY 2001	PENALTIES FOR UNALLOWABLE COST
52.242-4	JAN 1997	CERTIFICATION OF FINAL INDIRECT COSTS
52.242-13	JUL 1995	BANKRUPTCY
52.243-2	AUG 1987	CHANGES--COST REIMBURSEMENT
52.243-6	APR 1984	CHANGE ORDER ACCOUNTING
52.244-2	AUG 1998	SUBCONTRACTS - ALTERNATE I (AUG 1998)
52.244-5	DEC 1996	COMPETITION IN SUBCONTRACTING
52.246-11	FEB 1999	HIGHER LEVEL CONTRACT QUALITY REQUIREMENT (GOVERNMENT SPECIFICATION, AS9100 "MODEL FOR QUALITY ASSURANCE IN DESIGN/DEVELOPMENT, PRODUCTION, INSTALLATION, AND SERVICING")
52.246-25	FEB 1997	LIMITATION OF LIABILITY--SERVICES
52.247-1	APR 1984	COMMERCIAL BILL OF LADING NOTATIONS
52.247-63	JUN 2003	PREFERENCE FOR U.S. FLAG AIR CARRIERS
52.247-64	APR 2003	PREFERENCE FOR PRIVATELY OWNED U.S. FLAG COMMERCIAL VESSELS
52.247-67	JUN 1997	SUBMISSION OF COMMERCIAL TRANSPORTATION BILLS TO THE GENERAL SERVICES ADMINISTRATION FOR AUDITS
52.248-1	FEB 2000	VALUE ENGINEERING
52.251-2	JAN 1991	INTERAGENCY FLEET MANAGEMENT SYSTEMS VEHICLES AND RELATED SERVICES
52.249-6	SEP 1996	TERMINATION (COST-REIMBURSEMENT)
52.249-14	APR 1984	EXCUSABLE DELAYS
52.251-1	APR 1984	GOVERNMENT SUPPLY SOURCES
52.253-1	JAN 1991	COMPUTER GENERATED FORMS

II. NASA FAR SUPPLEMENT (48 CFR CHAPTER 18) CLAUSES

CLAUSE NUMBER	DATE	TITLE
1852.203-70	JUN 2001	DISPLAY OF INSPECTOR GENERAL HOTLINE POSTERS
1852.209-72	DEC 1988	COMPOSITION OF THE CONTRACTOR
1852.216-89	JUL 1997	ASSIGNMENT AND RELEASE FORMS
1852.219-74	SEP 1990	USE OF RURAL AREA SMALL BUSINESSES
1852.219-76	JUL 1997	NASA 8 PERCENT GOAL
1852.223-74	MAR 1996	DRUG AND ALCOHOL FREE WORKFORCE
1852.227-14	OCT 1995	RIGHTS IN DATA GENERAL
1852.228-75	OCT 1988	MINIMUM INSURANCE COVERAGE
1852.235-70	FEB 2003	CENTER FOR AEROSPACE INFORMATION
1852.237-70	DEC 1988	EMERGENCY EVACUATION PROCEDURES

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1852.242-76	MAR 1999	MODIFIED COST PERFORMANCE REPORT
1852.242-78	APR 2001	EMERGENCY MEDICAL SERVICES AND EVACUATION
1852.246-70	MAR 1997	MISSION CRITICAL SPACE SYSTEM PERSONNEL RELIABILITY PROGRAM

(End Of Clause)

I.2 CLAUSES INCORPORATED BY REFERENCE (FAR 52.252-2)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

<http://www.arnet.gov/far/>

<http://www.hq.nasa.gov/office/procurement/regs/nfstoc.htm>

<http://www.jsc.nasa.gov/bd2/jscbm/part-52.htm>

(End of clause)

I.3 APPROVAL OF CONTRACT (FAR 52.204-1)(DEC 1989)

This contract is subject to the written approval of the Procurement Officer, Johnson Space Center and shall not be binding until so approved.

(End of clause)

I.4 SECURITY CLASSIFICATION REQUIREMENTS (NASA 1852.204-75) (SEPT 1989)

Performance under this contract will involve access to and/or generation of classified information, work in a security area, or both, up to the level of Secret. See Federal Acquisition Regulation clause 52.204-2 in this contract and DD Form 254, Contract Security Classification Specification, Section J-1, Appendix C.

(End of clause)

I.5 SECURITY REQUIREMENTS FOR UNCLASSIFIED INFORMATION TECHNOLOGY RESOURCES (1852.204-76) (JUL 2002)

(a) The contractor shall be responsible for Information Technology security for all systems connected to a NASA network or operated by the contractor for NASA, regardless of location. This clause is applicable to all or any part of the contract that includes information technology resources or services in which the contractor must have physical or electronic access to NASA's sensitive information contained in unclassified systems that directly support the mission of the Agency. This includes information technology, hardware, software, and the management, operation, maintenance, programming, and system administration of computer systems, networks, and telecommunications systems.

Examples of tasks that require security provisions include:

- (1) Computer control of spacecraft, satellites, or aircraft or their payloads;
- (2) Acquisition, transmission or analysis of data owned by NASA with significant replacement cost should the contractor's copy be corrupted; and
- (3) Access to NASA networks or computers at a level beyond that granted the general public, e.g. bypassing a firewall.

(b) The contractor shall provide, implement, and maintain an IT Security Plan. This plan shall describe the processes and procedures that will be followed to ensure appropriate security of IT resources that are developed, processed, or used under this contract. The plan shall describe those parts of the contract to which this clause applies. The contractor's IT Security Plan shall be compliant with Federal laws that include, but are not limited to, the Computer Security Act of 1987 (40 U.S.C. 1441 et seq.) and the Government Information Security Reform Act of 2000. The plan shall meet IT security requirements in accordance with Federal and NASA policies and procedures that include, but are not limited to:

- (1) OMB Circular A-130, Management of Federal Information Resources, Appendix III, Security of Federal Automated Information Resources;
- (2) NASA Procedures and Guidelines (NPG) 2810.1, Security of Information Technology; and
- (3) Chapter 3 of NPG 1620.1, NASA Security Procedures and Guidelines.

(c) Within 60 days after contract award, the contractor shall submit for NASA approval an IT Security Plan. This plan must be consistent with and further detail the approach contained in the offeror's proposal or sealed bid that resulted in the award of this contract and in compliance with the requirements stated in this clause. The plan, as approved by the Contracting Officer, shall be incorporated into the contract as a compliance document.

(d) (1) Contractor personnel requiring privileged access or limited privileged access to systems operated by the contractor for NASA or interconnected to a NASA network shall be screened at an appropriate level in accordance with NPG 2810.1, Section 4.5; NPG 1620.1, Chapter 3; and paragraph (d)(2) of this clause. Those contractor personnel with non-privileged access do not require personnel screening. NASA shall provide screening using standard personnel screening National Agency Check (NAC) forms listed in paragraph (d)(3) of this clause, unless contractor screening in accordance with paragraph (d)(4) is approved. The contractor shall submit the required forms to the NASA Center Chief of Security (CCS) within fourteen (14) days after contract award or assignment of an individual to a position requiring screening. The forms may be obtained from the CCS. At the option of the government, interim access may be granted

pending completion of the NAC.

(2) Guidance for selecting the appropriate level of screening is based on the risk of adverse impact to NASA missions. NASA defines three levels of risk for which screening is required (IT-1 has the highest level of risk):

(i) **IT-1** – Individuals having privileged access or limited privileged access to systems whose misuse can cause very serious adverse impact to NASA missions. These systems include, for example, those that can transmit commands directly modifying the behavior of spacecraft, satellites or aircraft.

(ii) **IT-2** – Individuals having privileged access or limited privileged access to systems whose misuse can cause serious adverse impact to NASA missions. These systems include, for example, those that can transmit commands directly modifying the behavior of payloads on spacecraft, satellites or aircraft; and those that contain the primary copy of “level 1” data whose cost to replace exceeds one million dollars.

(iii) **IT-3** – Individuals having privileged access or limited privileged access to systems whose misuse can cause significant adverse impact to NASA missions. These systems include, for example, those that interconnect with a NASA network in a way that exceeds access by the general public, such as bypassing firewalls; and systems operated by the contractor for NASA whose function or data has substantial cost to replace, even if these systems are not interconnected with a NASA network.

(3) Screening for individuals shall employ forms appropriate for the level of risk as follows:

(i) IT-1: Fingerprint Card (FC) 258 and Standard Form (SF) 85P, Questionnaire for Public Trust Positions;

(ii) IT-2: FC 258 and SF 85, Questionnaire for Non-Sensitive Positions; and

(iii) IT-3: NASA Form 531, Name Check, and FC 258.

(4) The Contracting Officer may allow the contractor to conduct its own screening of individuals requiring privileged access or limited privileged access provided the contractor can demonstrate that the procedures used by the contractor are equivalent to NASA’s personnel screening procedures. As used here, equivalent includes a check for criminal history, as would be conducted by NASA, and completion of a questionnaire covering the same information as would be required by NASA.

(5) Screening of contractor personnel may be waived by the Contracting Officer for those individuals who have proof of:

(i) Current or recent national security clearances (within last three years);

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(ii) Screening conducted by NASA within last three years; or

(iii) Screening conducted by the contractor, within last three years, that is equivalent to the NASA personnel screening procedures as approved by the Contracting Officer under paragraph (d)(4) of this clause.

(e) The contractor shall ensure that its employees, in performance of the contract, receive annual IT security training in NASA IT Security policies, procedures, computer ethics, and best practices in accordance with NPG 2810.1, Section 4.3 requirements. The contractor may use web-based training available from NASA to meet this requirement.

(f) The contractor shall afford NASA, including the Office of Inspector General, access to the contractor's and subcontractors' facilities, installations, operations, documentation, databases and personnel used in performance of the contract. Access shall be provided to the extent required to carry out a program of IT inspection, investigation and audit to safeguard against threats and hazards to the integrity, availability and confidentiality of NASA data or to the function of computer systems operated on behalf of NASA, and to preserve evidence of computer crime.

(g) The contractor shall incorporate the substance of this clause in all subcontracts that meet the conditions in paragraph (a) of this clause.

(End of clause)

I.6 OMBUDSMAN (NASA 1852.215-84) (JUN 2000)

(a) An ombudsman has been appointed to hear and facilitate the resolution of concerns from offerors, potential offerors, and contractors during the preaward and postaward phases of this acquisition. When requested, the ombudsman will maintain strict confidentiality as to the source of the concern. The existence of the ombudsman is not to diminish the authority of the contracting officer, the Source Evaluation Board, or the selection official. Further, the ombudsman does not participate in the evaluation of proposals, the source selection process, or the adjudication of formal contract disputes. Therefore, before consulting with an ombudsman, interested parties must first address their concerns, issues, disagreements, and/or recommendations to the contracting officer for resolution.

(b) If resolution cannot be made by the contracting officer, interested parties may contact the installation ombudsman,

Susan H. Garman, Associate Director (Management)/ Mail Code: AC Phone: 281-483-0490
FAX: 281-483-2200

Concerns, issues, disagreements, and recommendations, which cannot be resolved at the installation, may be referred to the NASA ombudsman, Robert Scott Thompson, the Director of the Contract Management Division, at 202-358-0422, facsimile 202-358-3083, e-mail sthoms1@hq.nasa.gov. Please do not contact the ombudsman to request copies of the

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solicitation, verify offer due date, or clarify technical requirements. Such inquiries shall be directed to the contracting officer or as specified elsewhere in this document.

(End of clause)

I.7 OPTION TO EXTEND THE TERM OF THE CONTRACT (FAR 52.217-9)
(MAR 2000)

(a) The Government may extend the term of this contract by written notice to the contractor within 30 days; provided that the Government gives the contractor a preliminary written notice of its intent to extend at least 30 days before the contract expires. The preliminary notice does not commit the Government to an extension.

(b) If the Government exercises this option, the extended contract shall be considered to include this option clause.

(c) The total duration of this contract, including the exercise of any options under this clause, shall not exceed 6 years and 9 months.

(End of clause)

I.8 TAXES--FOREIGN COST-REIMBURSEMENT CONTRACTS
(FAR 52.229-8)(MAR 1990)

(a) Any tax or duty from which the United States Government is exempt by agreement with the Government of any countries for which travel is required under this contract, or from which the contractor or any subcontractor under this contract is exempt under the laws of such countries, shall not constitute an allowable cost under this contract.

(b) If the contractor or subcontractor under this contract obtains a foreign tax credit that reduces its Federal income tax liability under the United States Internal Revenue Code (Title 26, U.S. Code) because of the payment of any tax or duty that was reimbursed under this contract, the amount of the reduction shall be paid or credited at the time of such offset to the Government of the United States as the Contracting Officer directs.

(End of clause)

I.9 ENGINEERING CHANGE PROPOSALS (NASA 1852.243-70) (OCT 2001)

(a) Definitions.

“ECP” means an Engineering Change Proposal (ECP) which is a proposed engineering change and the documentation by which the change is described, justified, and submitted to the procuring activity for approval or disapproval.

(b) Either party to the contract may originate ECPs. Implementation of an approved ECP may occur by either a supplemental agreement or, if appropriate, as a written change order to the contract.

(c) Any ECP submitted to the Contracting Officer shall include a "not-to-exceed" ____ [price or estimated cost] increase or decrease adjustment amount, if any, and the required [time of delivery

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or period of performance] adjustment, if any, acceptable to the originator of the ECP. If the change is originated within the Government, the Contracting Officer shall obtain a written agreement with the contractor regarding the "not-to-exceed" ____ [price or estimated cost] and [delivery or period of performance] adjustments, if any, prior to issuing an order for implementation of the change.

(d) After submission of a contractor initiated ECP, the contracting officer may require the contractor to submit the following information:

(1) Cost or pricing data in accordance with FAR 15.403-5 if the proposed change meets the criteria for its submission under FAR 15.403-4; or

(2) Information other than cost or pricing data adequate for contracting officer determination of price reasonableness or cost realism. The contracting officer reserves the right to request additional information if that provided by the contractor is considered inadequate for that purpose. If the contractor claims applicability of one of the exceptions to submission of cost or pricing data, it shall cite the exception and provide rationale for its applicability.

(e) If the ECP is initiated by NASA, the contracting officer shall specify the cost information requirements, if any.

(End of clause)

ALTERNATE I
(JULY 1997)

As prescribed in 1843.205-70(a)(2), add the following paragraph (f), modified to suit contract type, to the basic clause:

(f) If the ____ [price or estimated cost] adjustment proposed for any contractor-originated ECP is ____ [insert a percent or dollar amount of the contract price or estimated cost] or less, the ECP shall be executed with no adjustment to the contract ____ [price or estimated cost].

(End of clause)

ALTERNATE II
(SEPTEMBER 1990)

As prescribed in 1843.205-70(a)(3), add the following sentence at the end of paragraph (c) of the basic clause:

An ECP accepted in accordance with the Changes clause of this contract shall not be considered an authorization to the contractor to exceed the estimated cost in the contract Schedule, unless the estimated cost is increased by the change order or other contract modification.

(End of clause)

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I.10 SHARED SAVINGS (NASA 1852.243-71) (MAR 1997)

(a) The contractor is entitled, under the provisions of this clause, to share in cost savings resulting from the implementation of cost reduction projects which are presented to the Government in the form of Cost Reduction Proposals (CRP) and approved by the Contracting Officer. These cost reduction projects may require changes to the terms, conditions or statement of work of this contract. Any cost reduction projects must not change the essential function of any products to be delivered or the essential purpose of services to be provided under the contract.

(b) Definitions:

(1) **Cost savings**, as contemplated by this clause mean savings that result from instituting changes to the covered contract, as identified in an approved Cost Reduction Proposal.

(2) **Cost Reduction Proposal** - For the purposes of this clause, a Cost Reduction Proposal means a proposal that recommends alternatives to the established procedures and/or organizational support of a contract or group of contracts. These alternatives must result in a net reduction of contract cost and price to NASA. The proposal will include technical and cost information sufficient to enable the Contracting Officer to evaluate the CRP and approve or disapprove it.

(3) **Covered contract** - As used in this provision, covered contract means the contract, including unexercised options but excluding future contracts, whether contemplated or not, against which the CRP is submitted.

(4) **Contractor implementation costs** - As used in this provision, contractor implementation costs, or "implementation costs", shall mean those costs which the contractor incurs on covered contracts specifically in developing, preparing, submitting, and negotiating a CRP, as well as those costs the contractor will incur on covered contracts to make any structural or organizational changes in order to implement an approved CRP.

(5) **Government costs** - As used in this provision, the term Government costs means internal costs of NASA, or any other Government agency, which result directly from development and implementation of the CRP. These may include, but are not limited to, costs associated with the administration of the contract or with such contractually related functions such as testing, operations, maintenance and logistics support. These costs also include costs associated with other Agency contracts (including changes in contract price or cost and fee) that may be affected as a result of the implementation of a CRP. They do not include the normal administrative costs of reviewing and processing the Cost Reduction Proposal.

(c) General. The contractor will develop, prepare and submit CRP's with supporting information as detailed in paragraph (e) of this clause, to the Contracting Officer. The CRP will describe the proposed cost reduction activity in sufficient detail to enable the Contracting Officer to evaluate it and to approve or disapprove it. The contractor shall share in any net cost savings realized

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from approved and implemented CRPs in accordance with the terms of this clause. The contractor's actual percentage share of the cost savings shall be a matter for negotiation with the Contracting Officer, but shall not, in any event, exceed 50 percent of the total cost savings recognized by the Contracting Officer. The contractor may propose changes in other activities that impact performance on its contract, including Government and other contractor operations, if such changes will optimize cost savings. A contractor shall not be entitled to share, however, in any cost savings that are internal to the Government, or which result from changes made to any contracts to which it is not a party even if those changes were proposed as a part of its CRP. Early communication between the contractor and Government is encouraged. The communication may be in the form of a concept paper or preliminary proposal. The Government is not committed to accepting any proposal as a result of these early discussions.

(d) Computation of cost savings. The cost savings to be shared between the Government and the contractor will be computed by the Contracting Officer by comparing a current estimate to complete (ETC) for the covered contract, as structured before implementation of the proposed CRP, to a revised ETC which takes into account the implementation of that CRP. The cost savings to be shared shall be reduced by any cost overrun, whether experienced or projected, that is identified on the covered contract before implementation of the CRP. Although a CRP may result in cost savings that extend far into the future, the period in which the contractor may share in those savings will be limited to no more than five years. Implementation costs of the contractor must be considered and specifically identified in the revised ETC. The Contracting Officer shall offset contractor cost savings by any increased costs (whether implementing or recurring) to the Government when computing the total cost savings to be shared. The contractor shall not be entitled, under the provisions of this clause, to share in any cost reductions to the contract that are the result of changes stemming from any action other than an approved CRP. However, this clause does not limit recovery of any such reimbursements that are allowed as a result of other contract provisions.

(e) Supporting Information. As a minimum, the contractor shall provide the following supporting information with each CRP:

- (1) Identification of the current contract requirements or established procedures and/or organizational support which are proposed to be changed.
- (2) A description of the difference between the current process or procedure and the proposed change. This description shall address how proposed changes will meet NASA requirements and discuss the advantages and disadvantages of the existing practice and the proposed changes.
- (3) A list of contract requirements which must be revised, if any, if the CRP is approved, along with proposed revisions. Any changes to NASA or delegated contract management processes should also be addressed.
- (4) Detailed cost estimates which reflect the implementation costs of the CRP.

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(5) An updated ETC for the covered contract, unchanged, and a revised ETC for the covered contract which reflects changes resulting from implementing the CRP. If the CRP proposes changes to only a limited number of elements of the contract, the ETCs need only address those portions of the contract that have been impacted. Each ETC shall depict the level of costs incurred or to be incurred by year, or to the level of detail required by the Contracting Officer. If other CRPs have been proposed or approved on a contract, the impact of these CRPs must be addressed in the computation of the cost savings to ensure that the cost savings identified are attributable only to the CRP under consideration in the instant case.

(6) Identification of any other previous submissions of the CRP, including the dates submitted, the agencies and contracts involved, and the disposition of those submittals.

(f) Administration.

(1) The contractor shall submit proposed CRPs to the Contracting Officer who shall be responsible for the review, evaluation and approval. Normally, CRP's should not be entertained for the first year of performance to allow the Contracting Officer to assess performance against the basic requirements. If a cost reduction project impacts more than a single contract, the contractor may, upon concurrence of the Contracting Officers responsible for the affected contracts, submit a single CRP which addresses fully the cost savings projected on all affected contracts that contain this Shared Savings Clause. In the case of multiple contracts affected, responsibility for the review and approval of the CRP will be a matter to be decided by the affected Contracting Officers.

(2) Within 60 days of receipt, the Contracting Officer shall complete an initial evaluation of any proposed cost reduction plan to determine its feasibility. Failure of the Contracting Officer to provide a response within 60 days shall not be construed as approval of the CRP. The Government shall promptly notify the contractor of the results of its initial evaluation and indicate what, if any, further action will be taken. If the Government determines that the proposed CRP has merit, it will open discussions with the contractor to establish the cost savings to be recognized, the contractor's share of the cost savings, and a payment schedule. The contractor shall continue to perform in accordance with the terms and conditions of the existing contract until a contract modification is executed by the Contracting Officer. The modification shall constitute approval of the CRP and shall incorporate the changes identified by the CRP, adjust the contract cost and/or price, establish the contractor's share of cost savings, and incorporate the agreed to payment schedule.

(3) The contractor will receive payment by submitting invoices to the Contracting Officer for approval. The amount and timing of individual payments will be made in accordance with the schedule to be established with the Contracting Officer. Notwithstanding the overall savings recognized by the Contracting Officer as a result of an approved CRP, payment of any portion of the contractor's share of savings shall not be made until NASA begins to realize a net cost savings on the contract (i.e., implementation, startup and other increased costs resulting from the change have been offset by cumulative cost savings). Savings associated with unexercised options will not be paid unless and until the contract options are

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exercised. It shall be the responsibility of the contractor to provide such justification, as the Contracting Officer deems necessary to substantiate that cost savings are being achieved.

(4) Any future activity, including a merger or acquisition undertaken by the contractor (or to which the contractor becomes an involved party), which has the effect of reducing or reversing the cost savings realized from an approved CRP for which the contractor has received payment may be cause for recomputing the net cost savings associated with any approved CRP. The Government reserves the right to make an adjustment to the contractor's share of cost savings and to receive a refund of moneys paid if necessary. Such adjustment shall not be made without notifying the contractor in advance of the intended action and affording the contractor an opportunity for discussion.

(g) Limitations. Contract requirements that are imposed by statute shall not be targeted for cost reduction exercises. The contractor is precluded from receiving reimbursements under both this clause and other incentive provisions of the contract, if any, for the same cost reductions.

(h) Disapproval of, or failure to approve, any proposed cost reduction proposal shall not be considered a dispute subject to remedies under the Disputes clause.

(i) Cost savings paid to the contractor in accordance with the provisions of this clause do not constitute profit or fee within the limitations imposed by 10 U.S.C. 2306(d) and 41 U.S.C. 254(b).

(End of clause)

I.11 SUBCONTRACTS FOR COMMERCIAL ITEMS (FAR 52.244-6) (APR 2003)

(a) *Definitions.* As used in this clause:

"Commercial item" has the meaning contained in the clause at 52.202-1, Definitions.
"Subcontract" includes a transfer of commercial items between divisions, subsidiaries, or affiliates of the contractor or subcontractor at any tier.

(b) To the maximum extent practicable, the contractor shall incorporate, and require its subcontractors at all tiers to incorporate, commercial items or non-developmental items as components of items to be supplied under this contract.

(c)(1) The contractor shall insert the following clauses in subcontracts for commercial items:

(i) 52.219-8, Utilization of Small Business Concerns (Oct 2000) (15 U.S.C. 637(d)(2) and (3)), in all subcontracts that offer further subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceeds \$500,000 (\$1,000,000 for construction of any public facility), the subcontractor must include 52.219-8 in lower tier subcontracts that offer subcontracting opportunities.

(ii) 52.222-26, Equal Opportunity (Apr 2002) (E.O. 11246).

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(iii) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (Dec 2001) (38 U.S.C. 4212(a));

(iv) 52.222-36, Affirmative Action for Workers with Disabilities (June 1998) (29 U.S.C. 793).

(v) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (June 2000) (46 U.S.C. Appx 1241) (flowdown not required for subcontracts awarded beginning May 1, 1996).

(2) While not required, the contractor may flow down to subcontracts for commercial items a minimal number of additional clauses necessary to satisfy its contractual obligations.

(d) The contractor shall include the terms of this clause, including this paragraph (d), in subcontracts awarded under this contract.

(End of clause)

I.12 GOVERNMENT PROPERTY (COST-REIMBURSEMENT, TIME-AND-MATERIAL OR LABOR-HOUR CONTRACTS) (FAR 52.245-5) (JUL 1995)(DEVIATION)

(a) Government-furnished property.

(1) The term "contractor's managerial personnel," as used in paragraph (g) of this clause, means any of the contractor's directors, officers, managers, superintendents, or equivalent representatives who have supervision or direction of:

(i) All or substantially all of the contractor's business;

(ii) All or substantially all of the contractor's operation at any one plant, or separate location at which the contract is being performed; or

(iii) A separate and complete major industrial operation connected with performing this contract.

(2) The Government shall deliver to the contractor, or use in connection with and under the terms of this contract, the Government-furnished property described in the Schedule or specifications, together with such related data and information as the contractor may request and as may be reasonably required for the intended use of the property (hereinafter referred to as "Government-furnished property").

(3) The delivery or performance dates for this contract are based upon the expectation that Government-Furnished property suitable for use will be delivered to the contractor at the times stated in the Schedule or, if not so stated, in sufficient time to enable the contractor to meet the contract's delivery or performance dates.

(4) If Government-Furnished property is received by the contractor in a condition not suitable for the intended use, the contractor shall, upon receipt, notify the Contracting

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Officer, detailing the facts, and, as directed by the Contracting Officer and at Government expense, either effect repairs or modification or return or otherwise dispose of the property. After completing the directed action and upon written request of the contractor, the Contracting Officer shall make an equitable adjustment as provided in paragraph (h) of this clause.

(5) If Government-furnished property is not delivered to the contractor by the required time or times, the Contracting Officer shall, upon the contractor's timely written request, make a determination of the delay, if any, caused the contractor and shall make an equitable adjustment in accordance with paragraph (h) of this clause.

(b) Changes in Government-furnished property.

(1) The Contracting Officer may, by written notice, (i) decrease the Government-Furnished property provided or to be provided under this contract or (ii) substitute other Government-Furnished property for the property to be provided by the Government or to be acquired by the contractor for the Government under this contract. The contractor shall promptly take such action as the Contracting Officer may direct regarding the removal, shipment, or disposal of the property covered by this notice.

(2) Upon the contractor's written request, the Contracting Officer shall make an equitable adjustment to the contract in accordance with paragraph (h) of this clause, if the Government has agreed in the Schedule to make such property available for performing this contract and there is any:

- (i) Decrease or substitution in this property pursuant to subparagraph (b)(1) above; or
- (ii) Withdrawal of authority to use property, if provided under any other contract or lease.

(c) Title.

(1) The Government shall retain title to all Government-furnished property.

(2) Title to all property purchased by the contractor for which the contractor is entitled to be reimbursed as a direct item of cost under this contract shall pass to and vest in the Government upon the vendor's delivery of such property.

(3) Title to all other property, the cost of which is reimbursable to the contractor, shall pass to and vest in the Government upon:

- (i) Issuance of the property for use in contract performance;
- (ii) Commencement of processing of the property or use in contract performance; or
- (iii) Reimbursement of the cost of the property by the Government, whichever occurs first.

(4) All Government-Furnished property and all property acquired by the contractor, title to which vests in the Government under this paragraph (collectively referred to as "Government property"), are subject to the provisions of this clause. Title to Government property shall not be affected by its incorporation into or attachment to any property not

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owned by the Government, nor shall Government property become a fixture or lose its identity as personal property by being attached to any real property.

(d) Use of Government property. The Government property shall be used only for performing this contract, unless otherwise provided in this contract or approved by the Contracting Officer.

(e) Property administration.

(1) The contractor shall be responsible and accountable for all Government property provided under the contract and shall comply with Federal Acquisition Regulation (FAR) Subpart 45.5, as in effect on the date of this contract.

(2) The contractor shall establish and maintain a program for the use, maintenance, repair, protection, and preservation of Government property in accordance with sound business practice and the applicable provisions of FAR Subpart 45.5.

(3) If damage occurs to Government property, the risk of which has been assumed by the Government under this contract, the Government shall replace the items or the contractor shall make such repairs as the Government directs. However, if the contractor cannot affect such repairs within the time required, the contractor shall dispose of the property as directed by the Contracting Officer. When any property for which the Government is responsible is replaced or repaired, the Contracting Officer shall make an equitable adjustment in accordance with paragraph (h) of this clause.

(f) Access. The Government and all its designees shall have access at all reasonable times to the premises in which any Government property is located for the purpose of inspecting the Government property.

(g) Limited risk of loss.

(1) The contractor shall not be liable for loss or destruction of, or damage to, the Government property provided under this contract or for expenses incidental to such loss, destruction, or damage, except as provided in subparagraphs (2) and (3) below.

(2) The contractor shall be responsible for loss or destruction of, or damage to, the Government property provided under this contract (including expenses incidental to such loss, destruction, or damage):

(i) That results from a risk expressly required to be insured under this contract, but only to the extent of the insurance required to be purchased and maintained or to the extent of insurance actually purchased and maintained, whichever is greater;

(ii) That results from a risk that is in fact covered by insurance or for which the contractor is otherwise reimbursed, but only to the extent of such insurance or reimbursement;

(iii) For which the contractor is otherwise responsible under the express terms of this contract;

(iv) That results from willful misconduct or lack of good faith on the part of the contractor's managerial personnel; or;

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(v) That results from a failure on the part of the contractor, due to willful misconduct or lack of good faith on the part of the contractor's managerial personnel, to establish and administer a program or system for the control, use, protection, preservation, maintenance, and repair of Government property as required by paragraph (e) of this clause.

(3) (i) If the contractor fails to act as provided by subdivision (g)(2)(v) above, after being notified (by certified mail addressed to one of the contractor's managerial personnel) of the Government's disapproval, withdrawal of approval, or non-acceptance of the system or program, it shall be conclusively presumed that such failure was due to willful misconduct or lack of good faith on the part of the contractor's managerial personnel.

(ii) In such event, any loss or destruction of, or damage to, the Government property shall be presumed to have resulted from such failure unless the contractor can establish by clear and convincing evidence that such loss, destruction, or damage

(A) Did not result from the contractor's failure to maintain an approved program or system; or

(B) Occurred while an approved program or system was maintained by the contractor.

(4) If the contractor transfers Government property to the possession and control of a subcontractor, the transfer shall not affect the liability of the contractor for loss or destruction of, or damage to, the property as set forth above. However, the contractor shall require the subcontractor to assume the risk of, and be responsible for, any loss or destruction of, or damage to, the property while in the subcontractor's possession or control, except to the extent that the subcontract, with the advance approval of the Contracting Officer, relieves the subcontractor from such liability. In the absence of such approval, the subcontract shall contain appropriate provisions requiring the return of all Government property in as good condition as when received, except for reasonable wear and tear or for its use in accordance with the provisions of the prime contract.

(5) The contractor shall notify the Contracting Officer upon loss or destruction of, or damage to, Government property provided under this contract (with the exception of low value property for which loss, damage, or destruction is reported at contract termination, completion, or when needed for continued contract performance. The contractor shall take all reasonable action to protect the Government property from further damage, separate the damaged and undamaged Government property, put all the affected Government property in the best possible order, and furnish to the Contracting Officer a statement of:

(i) The lost, destroyed, or damaged Government property;

(ii) The time and origin of the loss, destruction, or damage;

(iii) All known interests in commingled property of which the Government property is a part; and

(iv) The insurance, if any, covering any part of or interest in such commingled property.

(6) The contractor shall repair, renovate, and take such other action with respect to damaged Government property as the Contracting Officer directs. If the Government property is

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destroyed or damaged beyond practical repair, or is damaged and so commingled or combined with property of others (including the contractor's) that separation is impractical, the contractor may, with the approval of and subject to any conditions imposed by the Contracting Officer, sell such property for the account of the Government. Such sales may be made in order to minimize the loss to the Government, to permit the resumption of business, or to accomplish a similar purpose. The contractor shall be entitled to an equitable adjustment in the contract price for the expenditures made in performing the obligations under this subparagraph (g)(6) in accordance with paragraph (h) of this clause. However, the Government may directly reimburse the loss and salvage organization for any of their charges. The Contracting Officer shall give due regard to the contractor's liability under this paragraph (g) when making any such equitable adjustment.

(7) The contractor shall not be reimbursed for, and shall not include as an item of overhead, the cost of insurance or of any reserve covering risk of loss or destruction of, or damage to, Government property, except to the extent that the Government may have expressly required the contractor to carry such insurance under another provision of this contract.

(8) In the event the contractor is reimbursed or otherwise compensated for any loss or destruction of, or damage to, Government property, the contractor shall use the proceeds to repair, renovate, or replace the lost, destroyed, or damaged Government property or shall otherwise credit the proceeds to, or equitably reimburse, the Government, as directed by the Contracting Officer.

(9) The contractor shall do nothing to prejudice the Government's rights to recover against third parties for any loss or destruction of, or damage to, Government property. Upon the request of the Contracting Officer, the contractor shall, at the Government's expense, furnish to the Government all reasonable assistance and cooperation (including the prosecution of suit and the execution of instruments of assignment in favor of the Government) in obtaining recovery. In addition, where a subcontractor has not been relieved from liability for any loss or destruction of, or damage to, Government property, the contractor shall enforce for the benefit of the Government the liability of the subcontractor for such loss, destruction, or damage.

(h) Equitable adjustment. When this clause specifies an equitable adjustment, it shall be made to any affected contract provision in accordance with the procedures of the Changes clause. When appropriate, the Contracting Officer may initiate an equitable adjustment in favor of the Government. The right to an equitable adjustment shall be the contractor's exclusive remedy. The Government shall not be liable to suit for breach of contract for

- (1) Any delay in delivery of Government-furnished property;
- (2) Delivery of Government-furnished property in a condition not suitable for its intended use;
- (3) A decrease in or substitution of Government-furnished property; or
- (4) Failure to repair or replace Government property for which the Government is responsible.

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(i) Final accounting and disposition of Government property. Upon completing this contract, or at such earlier dates as may be fixed by the Contracting Officer, the contractor shall submit, in a form acceptable to the Contracting Officer, inventory schedules covering all items of Government property not consumed in performing this contract or delivered to the Government. The contractor shall prepare for shipment, deliver f.o.b. origin, or dispose of the Government property as may be directed or authorized by the Contracting Officer. The net proceeds of any such disposal shall be credited to the cost of the work covered by this contract or paid to the Government as directed by the Contracting Officer. The foregoing provisions shall apply to scrap from Government property; provided, however, that the Contracting Officer may authorize or direct the contractor to omit from such inventory schedules any scrap consisting of faulty castings or forgings or of cutting and processing waste, such as chips, cuttings, borings, turnings, short ends, circles, trimmings, clippings, and remnants, and to dispose of such scrap in accordance with the contractor's normal practice and account for it as a part of general overhead or other reimbursable costs in accordance with the contractor's established accounting procedures.

(j) Abandonment and restoration of contractor premises. Unless otherwise provided herein, the Government

(1) May abandon any Government property in place, at which time all obligations of the Government regarding such abandoned property shall cease; and

(2) Has no obligation to restore or rehabilitate the contractor's premises under any circumstances (e.g., abandonment, disposition upon completion of need, or contract completion). However, if the Government-furnished property (listed in the Schedule or specifications) is withdrawn or is unsuitable for the intended use, or if other Government property is substituted, then the equitable adjustment under paragraph (h) of this clause may properly include restoration or rehabilitation costs.

(k) Communications. All communications under this clause shall be in writing.

(l) Overseas contracts. If this contract is to be performed outside the United States of America, its territories, or possessions, the words "Government" and "Government-furnished" (wherever they appear in this clause) shall be construed as "United States Government" and "United States Government-furnished," respectively.

(End of clause)

I.13 ORDERING FAR 52.216-18 (OCT 1995)

(a) Any supplies and services to be furnished under this contract shall be ordered by issuance of delivery orders or task orders by the individuals or activities designated in the Schedule. Such orders may be issued from contract award through contract completion.

(b) All delivery orders or task orders are subject to the terms and conditions of this contract. In the event of conflict between a delivery order or task order and this contract, the contract shall control.

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(c) If mailed, a delivery order or task order is considered "issued" when the Government deposits the order in the mail. Orders may be issued orally, by facsimile, or by electronic commerce methods only if authorized in the Schedule.

I.14 ORDER LIMITATIONS FAR 52.216-19 (OCT 1995)

(a) Minimum order. When the Government requires supplies or services covered by this contract in an amount of less than \$1 million, the Government is not obligated to purchase, nor is the contractor obligated to furnish, those supplies or services under the contract.

(b) Maximum order. The contractor is not obligated to honor:

- (1) Any order for a single item in excess of \$27 million;
- (2) Any order for a combination of items in excess of \$27 million; or
- (3) A series of orders from the same ordering office within 60 days that together call for quantities exceeding the limitation in subparagraph (b)(1) or (2) of this section.

(c) If this is a requirements contract (i.e., includes the Requirements clause at subsection 52.216-21 of the Federal Acquisition Regulation (FAR), the Government is not required to order a part of any one requirement from the contractor if that requirement exceeds the maximum-order limitations in paragraph (b) of this section.

(d) Notwithstanding paragraphs (b) and (c) of this section, the contractor shall honor any order exceeding the maximum order limitations in paragraph (b), unless that order (or orders) is returned to the ordering office within 5 days after issuance, with written notice stating the contractor's intent not to provide the supplies or services called for and the reasons. Upon receiving this notice, the Government may acquire the supplies or services from another source.

(End of clause)

I.15 INDEFINITE QUANTITY FAR 52.216-22 (OCT 1995)

Note: This clause refers to work described in Table J-1 in Attachment J-1, SOW identified as IDIQ.

(a) This is an indefinite-quantity contract for the supplies or services specified, and effective for the period stated, in the Schedule. The quantities of supplies and services specified in the Schedule are estimates only and are not purchased by this contract.

(b) Delivery or performance shall be made only as authorized by orders issued in accordance with the Ordering clause. The contractor shall furnish to the Government, when and if ordered, the supplies or services specified in the Schedule up to and including the quantity designated in the Schedule as the "maximum." The Government shall order at least the quantity of supplies or services designated in the Schedule as the "minimum."

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(c) Except for any limitations on quantities in the Order Limitations clause or in the Schedule, there is no limit on the number of orders that may be issued. The Government may issue orders requiring delivery to multiple destinations or performance at multiple locations.

(d) Any order issued during the effective period of this contract and not completed within that period shall be completed by the contractor within the time specified in the order. The contract shall govern the contractor's and Government's rights and obligations with respect to that order to the same extent as if the order were completed during the contract's effective period; provided, that the contractor shall not be required to make any deliveries under this contract after contract expiration, including any extensions provided under FAR Clauses 52.217-8 and 52.217-9.

(End of clause)

I.16. STATEMENT OF EQUIVALENT RATES FOR FEDERAL HIRES (FAR 52.222-42) (MAY 1989)

In compliance with the Service Contract Act of 1965, as amended, and the regulations of the Secretary of Labor (29 CFR part 4), this clause identifies the classes of service employees expected to be employed under the contract and states the wages and fringe benefits payable to each if they were employed by the contracting agency subject to the provisions of 5 U.S.C. 5341 or 5332.

*This Statement is for Information Only:
 It is not a Wage Determination*

Employee Class	Monetary Wage-Fringe Benefits
Computer Programmer, II	GS-7 \$16.50
Drafter, I	GS-3 \$10.61
Drafter, II	GS-4 \$11.91
Secretary, I	GS-4 \$11.91
Secretary, II	GS-5 \$13.32
Secretary, III	GS-6 \$14.85
Taxi Driver	GS-5 \$13.98
Engineering Technician, I	GS-3 \$10.61
Engineering Technician, II	GS-4 \$11.91
Engineering Technician, III	GS-5 \$13.32
Engineering Technician, IV	GS-7 \$16.50

[END OF SECTION]

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Table J-1 Mission Integration Contract Methods				
SOW	TITLE	SOW		
		CF	LOE	IDIQ
1.0	MANAGEMENT & INTEGRATION	X		
1.1	PROGRAM MANAGEMENT (Except 1.1.2)	X		
1.1.2	INTERNAL/EXTERNAL PROGRAM REVIEW SUPPORT		X	
1.2	BUSINESS MANAGEMENT	X		
1.3	CONFIGURATION MANAGEMENT/DATA INTEGRATION	X		
1.4	PROGRAM INFORMATION TECHNOLOGY	X		
1.5	INTERNATIONAL INTEGRATION			
1.5.1	RUSSIAN LANGUAGE & LOGISTICS SERVICES			
1.5.1.1	TRANSLATION			X
1.5.1.2	INTERPRETATION			X
1.5.1.3	RUSSIAN AND ENGLISH LANGUAGE TRAINING			
1.5.1.3.1	JSC LANGUAGE EDUCATION CENTER	X		
1.5.1.3.2	CREW LANGUAGE TRAINING			X
1.5.1.4	LOGISTICS (except 1.5.1.4.1)		X	
1.5.1.4.1	TRANSPORTATION SERVICES			X
1.5.2	INTERNATIONAL MISSION INTEGRATION			
1.5.2.1	INTERNATIONAL SHIPPING COORDINATION	X		
1.5.2.3	ISS HAM RADIO PROJECT	X		
1.5.2.4	JOINT CARGO CERTIFICATION TEAM		X	
1.5.2.5	EXPORT MANAGEMENT	X		
1.6	HUMAN SPACE FLIGHT COLLABORATION		X	
4.0	OPERATIONS			
4.1	MISSION INTEGRATION			
4.1.1	MISSION REQUIREMENTS & PLANNING			
4.1.1.1	INCREMENT/STAGE INTEGRATION (Except 4.1.1.1.5 & 4.1.1.1.9)	X		
4.1.1.1.5	INCREMENT ENGINEER TASKS		X	
4.1.1.1.9	STATION TACTICAL INCREMENT CONSUMABLES AND RESOURCE MANAGEMENT		X	
4.1.1.2	LAUNCH PACKAGE INTEGRATION (Except 4.1.1.2.8)		X	
4.1.1.2.8	LAUNCH PACKAGE SUPPORT FUNCTIONS	X		
4.1.1.3	MANIFEST (Except 4.1.1.3.3)	X		
4.1.1.3.3	TACTICAL/INCREMENT MANIFEST		X	
4.1.1.4	IMS		X	
4.1.1.5	CREW PROVISIONING/MISSION HABITABILITY (Except 4.1.1.5.1)		X	
4.1.1.5.1	CREW PROVISIONING	X		
4.1.1.6	IMAGERY (Except 4.1.1.6.4)	X		
4.1.1.6.4	SPECIAL REQUIREMENTS AND TECHNOLOGY ADVANCEMENT		X	
4.1.1.7	PROGRAM OPERATIONS INTEGRATION (Except 4.1.1.7.5)	X		
4.1.1.7.5	SPECIAL PROJECTS & STUDIES		X	
4.1.1.9	ON-ORBIT STOWAGE CAPABILITIES & CONFIGURATION (Except 4.1.1.9.2)	X		
4.1.1.9.2	TACTICAL INTERNAL AND EXTERNAL VOLUME CONFIGURATION		X	
6.0	SAFETY AND MISSION ASSURANCE	X		
6.1	S&MA MANAGEMENT	X		
6.2	S&MA INTEGRATION	X		
6.3	PROGRAM RISK	X		
6.4	ISS SAFETY PROGRAM	X		

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**SECTION J-1
STATEMENT OF WORK****1.0 MANAGEMENT AND INTEGRATION**

The Mission Integration contractor shall provide all resources and skills required to perform the services and deliver the products described in this Statement of Work (SOW), contract terms and conditions, applicable documents, Data Requirements Description (DRD's), and other sections of this contract. All DRD's are firm contractual obligation of the contract.

1.1 PROGRAM MANAGEMENT (CF)**1.1.1 Program Management and Administration**

The contractor shall conduct program management and administration, including risk management, necessary to develop and deliver the required International Space Station Program (ISSP) products and services as defined within this contract. The contractor shall provide for the planning, organization, control, and reporting of all activities required by this contract. The contractor shall assure accomplishment of all outcomes and deliverable products required by this contract.

1.1.1.1 The contractor shall develop, update, and implement a Mission Integration Program Management Plan in accordance with Mission Integration Program Management Plan (DRD B-PM-01). The contractor shall describe in the plan the contractor's management structure that fully and optimally integrates all related plans and systems including those of teamed businesses, major subcontractors and vendors. The contractor shall address in the plan the contractor's management of all systems, functions, and data requirements described in this SOW. In addition, the contractor shall develop, update and implement a Mission Integration Transition Plan in accordance with Mission Integration Transition Plan (DRD B-PM-03). The contractor shall describe in the plan the contractors management approach that fully and optimally transitions the systems functions and data requirements described in this statement of work from the incumbent contractor. The contractor shall develop and deliver an Organization Chart (DRD B-PM-05) that identifies management reporting structure and all personnel by location. The contractor shall develop and deliver a Certificate of Flight Readiness Implementation Plan (DRD B-PM-06) to define an approach and implementation plan for CoFR endorsement.

The contractor shall provide a MIC Internet portal as a foundation for communication and collaboration of MIC management functions. The implementation shall capture contract management and technical content, such as plans, procedures, ACAs, metrics, calendars, technical forums, contract news, and contract deliverables. Each user shall be provided an ID and password and shall be provided to MIC employees, NASA civil servants, and associate contractors to access MIC products, schedules, and data. Appropriate electronic links from the MIC Internet portal to the ISS program MIS shall be established to provide timely and accurate

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source data to key NASA managers.

1.1.1.2 The contractor shall conduct monthly and quarterly Performance Management Reviews (PMR's) with the International Space Station Program Office (ISSPO), in accordance with Integrated Management Review Products (DRD B-PM-02) for the work performed on this contract. The reviews shall provide the ISSP with insight into the contractor's, subcontractors', and vendors' overall technical, schedule, and cost performance and status. Metrics that effectively indicate the level of success and quality in the execution of contract requirements and the status of the contractor's performance against the performance standards contained within this SOW and elsewhere in this contract shall be defined through the Performance Assessment Plan and Performance Assessment Reports (DRD B-PM-04) and presented at the PMR's. PMR presentations shall depict performance measurement, quality, accomplishments, issues and corrective actions, and related company financial status, including rates and any other data necessary to status the ISSP. The metrics shall be developed by the contractor, with linkage to program-level metrics in the ISSP Management Information System (MIS) (reference 1.1.1.3 MIS Data Requirements).

The contractor shall provide a Contract Close-Out Plan in accordance with Contract Close-Out Plan (DRD B-PR-01).

Contractor shall adapt best practices for measuring and increasing customer satisfaction by including a customer feedback form with the product and service they produce or provide allowing continuing improvement efforts to focus on the specific areas of customer concern. Corrective Action Reports (CAR) shall be initiated for each questionnaire that does not meet a mutually agreed to quality standard. Metrics shall be recorded into the Barrios Performance Measurement System for NASA review.

1.1.1.3 MIS Data Requirements

ISS MIS is a web-based repository designed to keep ISSP management and personnel aware of the most current ISSP technical, financial, workforce, schedules, and operational information, including issues and risks. MIS links ISSP core business issues and goals with the technical aspects of the Program. To accomplish this, ISSP managers will identify contractor provided financial planning, costs, workforce data, schedules, metrics, technical performance and other contractor provided information to be linked to the MIS. The contractor provided information will be a subset of data that is required by the MIC contractor in the existing DRD's. NASA will identify and the contractor shall link to the MIS, shall identify and implement the mechanisms for linking this data to the MIS; shall identify and implement changes to the DRDs with contractor defined formats; shall provide compatibility to the MIS; and shall maintain the DRDs electronically in such a manner as to support electronic linkages to the MIS.

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1.1.1.4 Integrated Reporting

In addition to the collection and reporting of contractor data, the contractor shall assist in development of integrated contractor and NASA report to be posted on the MIO web page and delivered to the ISS Program Manager and MIS on a monthly basis. Typical data includes reporting of objectives for current ISS crew, ISS flight readiness for upcoming missions, and on-orbit resource current and projected statuses.

1.1.2 Internal/External Program Review Support (LOE)

The contractor shall develop briefing materials and analyses for ISS meetings with various internal and external review groups. These groups include the Aerospace Safety Advisory Panel (ASAP), Space Station Utilization Advisory Subcommittee (SSUAS), Stafford/Anfimov committee, Inspector General/General Accounting Office (IG/GAO), Space Flight Advisory Committee (SFAC), ISS Management and Cost Evaluation/NASA Advisory Council (IMCE/NAC), Independent Implementation Review (IIR), and cost assessments teams. The contractor shall prepare and present various topics, such as ISSP technical, cost, and schedule status, specific safety or risk issues, Research and Development (R&D) issues, and responses to external inquiries.

1.2 BUSINESS MANAGEMENT (CF)**1.2.1 Reserved****1.2.2 Reserved****1.2.3 Resources Management**

As part of the program management for this contract, including risk management, the contractor shall perform the following tasks in support of resources management:

1.2.3.1 The contractor shall develop, implement, maintain, and update a Contract Financial System which discretely tracks resources by Unique Project Number (UPN) source and contract Work Breakdown Structure (WBS) and elements of cost including labor, overhead, other direct costs, (i.e. travel and subcontracts) and indirect costs. The contractor's financial planning system shall support the Government budget process (i.e. Program Operating Plan (POP) and budget calls), and to support special requests for budget impacts. The ISSPO will, in accordance with the budget or special request guidelines and reporting format, specify the format and content of the contractor's inputs and supporting rationale. The contractor shall provide cost reporting in accordance with NF533 M/Q Cost Reporting (DRD B-PC-01). Reporting requirements are applicable to all tiers of subcontractors with annual expenditures of \$250,000 or more or with a total contract value of \$1 million under this contract.

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1.2.3.2 The contractor shall develop, implement, and maintain a Performance Measurement System (PMS) and provide a modified Cost Performance Reports (CPR) in accordance with Cost Performance Report and CPR Earned Value Methodology Report (DRD's B-PC-02 and B-PC-05). The PMS shall provide appropriate management visibility into all aspects of contractor, interdivisional, subcontractor, and vendor activities, including support to ISS operations, maintenance/sustaining engineering, and R&D activities. It shall be integrated and reconcilable with other required management systems and reporting requirements. Final negotiated CPR variance explanations and corrective action reporting levels and thresholds shall be consistent with ISS Performance Measurement System reporting requirements which are described in DRD B-PC-02.

A summary of the PMS report shall be provided in the monthly PMR. Technical issues, accomplishments, analysis of cost and schedule performance, and corrective actions in problem areas shall be provided within this report.

1.2.3.3 The contractor shall develop and provide Workforce Reports in accordance with (DRD B-PC-03) to show organization, geographical breakdown, and on-site versus off-site workforce allocations.

1.2.3.4 The contractor shall develop and provide a contract WBS and Dictionary, in accordance with the Work Breakdown Structure and Dictionary (DRD B-PC-04). The WBS and Dictionary shall indicate the mapping of the contractor WBS to the contract SOW WBS and the ISSP WBS (SSP 50659) at the lowest levels of the ISSP WBS. The contract SOW WBS shall serve as the framework for contract planning, budgeting, financial reporting, schedule resource loading, and schedule status reporting to the ISSPO. Major elements of work provided by subcontractors shall also be identified in the contract WBS.

1.2.4 Reserved**1.2.5 Scheduling**

1.2.5.1 The contractor shall assess top-level and develop and maintain logically linked lower level schedules with selected resource loaded activities, in accordance with Integrated MIO Schedules and ISS Program Schedule Updates (DRD's B-PC-06 and B-PC-07) as defined in the Integrated Schedules Planning Process Document. Resource loaded schedules shall provide earned value tracking to the Tier III level. Tier III schedules shall as a minimum be developed and maintained to provide critical path linkage to the Level I and Level II program milestones and will identify activities which are dependent upon other ISSP participants outside of this contract.

1.2.5.2 The contractor shall update top-level schedule inputs and lower level schedules on a daily/weekly basis. The contractor shall provide monthly updates, analysis and reports for all tasks, except as otherwise stated. The contractor shall develop and maintain special purpose schedule data packages, which include both detailed and summary level schedules and integrated

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cost/schedule analysis products; analysis includes identification of potential schedule impacts with interfacing organizations/contracts. (Example: daily and monthly ISSP special purpose schedules)

1.2.5.3 The contractor shall provide twice a month schedule status inputs external to this contract. The contractor shall provide schedule analysis to support schedule issues resolution, schedule status, and special schedule agenda topics to the Integrated Program Schedule Panel. As required, the contractor shall provide monthly status inputs to NASA institutional organizations and to the Space Shuttle Program.

1.2.5.4 The contractor's schedule tool shall interface with the existing ISSP database (Common Schedules Database (CSD)). The contractor shall utilize an equivalent contractor database to maintain status of schedules. The contractor shall evaluate CSD data weekly to determine data delinquencies as reported by the CSD, and work with co-owners of the milestone to address/resolve problems and data conflicts.

1.2.5.5 Integrated Risk and Schedule Analysis: The contractor shall perform schedule risk assessments that can be integrated into the overall Program schedule risk assessment, in order to address overall schedule risk status.

1.2.5.6 The contractor shall provide summary schedules to support NASA office managers for example Mission Integration and Operations Office, Cargo Planning and Imagery, etc. as defined in Integrated Mission Integrated Office Schedules DRD B-PC-06.

1.3 CONFIGURATION MANAGEMENT/DATA INTEGRATION (CF)

1.3.1 Configuration Management (CM)

The contractor shall implement, and administer configuration management operations as specified in this contract and in accordance with the ISSP Configuration Management Requirements (SSP 41170), Documentation Standards & Guidelines (SSP 50010), and the Configuration Management Handbook (SSP 50123). Additionally, the contractor shall be responsible for contract specific CM functions as described in each of the functional CM areas described below.

1.3.1.1 Management and Administration

The contractor shall develop and manage the ISSP CM/Data Management (DM) requirements on the contract in accordance with the contractor's CM Plan (DRD B-CM-01). The contractor shall develop, status, and maintain CM metrics that effectively indicate the level of success.

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1.3.1.2 Configuration Status Accounting and Verification

Reserved

1.3.1.3 Configuration Control / Change Management

1.3.1.3.1 The contractor shall process changes specific to the Mission Integration (MI) contract in accordance with SSP 50123. The contractor shall review provide evaluation of cost, schedule, and technical impacts to Program changes originating from outside the MI contract to determine if those changes have potential impacts to the MI contract in accordance with SSP 50123.

1.3.1.3.2 The contractor shall input and validate the Configuration Status Management Operations System (COSMOS) database to assign Change Request (CR) numbers, track/status changes, and provide accurate information, reports, and monthly metrics.

1.3.1.4 Data Management

The Mission Integration contractor shall perform the following Data Management activities specific to the MI contract:

1.3.1.4.1 The contractor shall provide an Engineering Release Unit for the release of baseline documentation and updates as defined in CM Requirements, SSP 41170. This shall include interface with the PI&C Contract Engineering Release Unit.

1.3.1.4.2 The contractor shall operate a Configuration Management Receipt Desk (CMRD) as defined in CM Requirements, SSP 41170. The contractor CMRD shall interface with the ISS Program CMRD and other ISS contract CMRDs.

1.3.1.4.3 The contractor shall provide Document Quality Assurance (DQA) for all NASA controlled Program documentation identified under this contract in accordance with SSP 50010.

1.3.2 Program Data Integration

1.3.2.1 The contractor shall provide the technical support and document updates to the Program Integration and Control (PI&C) Contractor Book Coordinator for the Mission Integration Data Set Blank Book (MIDS BB SSP 50622-02) to insure that data managed by the MIC contract and required from external sources to perform MIC functions is accurately described.

1.3.2.2 The contractor shall support the Program Data Integration Team in identifying and documenting data workflow processes associated with this contract that are impacts to work performance and cross other contractual interfaces. This includes support to data related meetings to share information on MIC data interfaces, responding to questions either written or

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verbal and providing evaluations and recommendations for potential process improvements.

1.4 PROGRAM INFORMATION TECHNOLOGY (CF)

The ISS contract strategy decentralizes the implementation of Information Technology (IT) except where program integration and control is necessary for appropriate program management and communication. The PI&C contractor will provide IT infrastructure for use by ISS participants to support the mission of the ISSP. The other contracts within the ISS contract strategy will provide the IT necessary to perform the requirements to meet the requirement of their respective contracts; since their contract intent is to not specifically contract for generalized IT products and services. The contractor may choose to utilize the ISSP IT infrastructure provided by PI&C when common products and services provide for increase supportability, promotes commonality, or cost efficiencies. Existing IT infrastructure is documented in the Information Systems Plan (SSP 50013).

1.4.1 IT Management

1.4.1.1 The contractor shall provide the IT necessary to meet the ISSP IT requirements, as defined in this contract, in accordance with Information Systems Plan (SSP 50013). NASA will provide standard software loads for all government provided desks (Reference JSC Standard Load Configuration for current software provided). The contractor is responsible for training of personnel in use of standard and unique IT skills.

1.4.1.2 The contractor shall develop and implement the IT Management Plan (DRD B-IT-01) for reportable IT.

1.4.1.3 The contractor shall report all IT delivered or direct costed to this contract by developing an implementing an IT Capital Investment Plan and associated reports in accordance with the ISS Capital Investment Planning document, (SSP-50222).

1.4.1.4 The contractor shall develop and implement an IT Security Plan in accordance with DRD B-IT-02.

1.4.1.5 The contractor shall implement an architecture that enables bi-directional digital data sharing with government representatives including transmission of information across firewalls and the required security access to support defined requirements. If the contractor implements Public Key Infrastructure, the contractor system shall be interoperable with the NASA Public Key Infrastructure system.

1.4.1.6 The contractor shall adhere to JSC IT website policies including NASA JSC Web Policy, JSC Policy on the Registration of Websites, and Section 508 of the Rehabilitation Act of 1974.

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1.4.2 Software Tool Development and Operations

1.4.2 GFD tools available for use on this contract are identified in Appendix D. Any modifications to these GFD tools shall be sustained employing a methodology which demonstrates consistency with the Software Engineering Institute (SEI) Level 3 Capability Maturity Model (CMM), or other comparable industry standard. CMMI certification is not required.

1.4.2.1 The International Travel Database (ITD) and the Mission Integration Database Application System (MIDAS) are provided as Government Furnished Data (GFD) to be utilized and sustained by the contractor in fulfilling the contract requirements and for use by the ISSP. Additional requirements for MIDAS are defined in section 4.1.1.3.4.

1.4.2.2 The contractor shall support the development and maintenance of other PC-based tools to accomplish the assessments and analyses defined in the SOW. Existing tools may be used or new tools may be developed at the contractor's discretion. Examples include the Station Tactical Resource Operations Management tool, stowage integration tools and Waste Management Assessment tools.

1.4.2.3 Other applications required for use in performing the requirements of this SOW but sustained outside of this contract are defined in Appendix I.

1.5 INTERNATIONAL INTEGRATION

The contractor shall adhere to the program policy, requirements, and processes defined in the following documents:

- a) Station Program Implementation Plan (SPIP) Volume 1: Station Program Management Plan (SSP 50200-01)
- b) International Space Station Program Certificate of Flight Readiness Process Document (SSP 50108)

1.5.1 Russian Language and Logistics Services

a) These services provide translation, interpretation, language training, and logistics services required by the ISSP. This work is directly related to mission integration and operations functions being carried out by NASA and the Russian Aviation and Space Agency (Rosaviakosmos), including their respective contractors. It is critical that all translation and interpretation associated with flight operations be properly performed in order to ensure the safety of the flight crew and the success of the mission. This contract provides for the communication and logistics services through which NASA and the Rosaviakosmos integrate their portions of the ISSP, including support to R&D activities. Languages other than English

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and Russian are not covered under this contract.

- b) The services defined in this SOW are performed in various locations in the U.S., Russia, and other countries as specified per the Meeting Support Request Form (MSRF) (Appendix H, Form 1) and approved by the COTR or designee. The primary location for most contractor activity in the U.S. is the JSC. Other major locations include the KSC and the MSFC. The primary locations for most contractor activity in Russia include the U.S. Embassy in Moscow, Mission Control Center in Korolev, Gagarin Cosmonaut Training Center (GCTC), (also referred to as Star City), launch complex in Baikonur, Rosaviakosmos office buildings in Moscow, the Institute of Bio-Medical Problems (IBMP), and Rosaviakosmos contractor facilities (Rocket Space Corporation–Energia (RSC-E), Khrunichev, etc).
- c) The contractor interpretation and translation services shall accurately and consistently use ordinary, scientific, technical, and agency terminology (requires ISS Lexicon adherence). The contractor shall implement ISS familiarization for all interpreters and translators, including freelance support. The contractor shall ensure minimal context changes or content omissions from interpretations and translations and shall have a target objective of zero errors. An error is defined to be non-standard English usage, incorrectly interpreted or translated information, and omitted text that results in a loss of information. For safety and mission critical work, zero errors are required.
- d) The contractor shall attach a NASA Service Evaluation Form (SEF) (Appendix H, Form 2) to each translation, training and interpretation event in order for NASA to evaluate the service provided.
- e) The contractor shall provide 24/7 Bilingual Customer Support in the US and Russia to ensure immediate response to emergency and after hours work requests.

1.5.1.1 Translation (IDIQ)

The contractor shall translate all Russian to English documentation and NASA approved limited English to Russian translation required to conduct vehicle integration and development, ISS operations, maintenance/sustaining engineering, and R&D activities. This includes support to biomedical research, physics experiments, fluid dynamics research, earth sciences research, and astronomical research. The contractor also translates Mission Control Center (MCC). This has proven to be critical to the successful implementation of U.S. and IP R&D onboard the ISS. A translation page consists of 250 words of the target document.

- a) The contractor shall perform Russian to English and NASA approved limited English to Russian document translations using the NASA Translation Request Form (TRF), (Appendix H, Form 3) or electronic equivalent. Document translation shall include, technical documents, engineering drawings, written agreements and protocols, formal and informal correspondence, and other written information. The contractor shall update and maintain the ISS Lexicon as required.

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Special circumstances will dictate that some translations be provided in real-time or short turn around time (hours). The Government will stipulate the required completion time of the translation work and negotiate impacts.

b) The contractor shall provide continuous support translations to support key operational tasks. Translation services shall be required on a 24-hour per day basis. The continuous support translations shall be performed by the continuous support interpreters (reference 1.5.1.2 f)) and will not require a TRF. Continuous support translations include the tasks defined in section 1.5.1.1 f) items 1) and 2) and g). A Continuous support unit is defined as one hour of support to the applicable continuous support tasks.

c) The contractor shall establish and maintain an electronic configuration control system for all translation products with NASA access for viewing, searching and retrieval using key words, subject, title, and date of all non-sensitive/confidential documents translated. Limited access for sensitive/confidential translation access shall be provided in accordance with the NASA TRF identification.

This system shall ensure traceability and easy access for all documents, changes, and approvals of completed work. When a translation task has been completed and delivered to NASA, the resulting document(s) shall be under configuration control by the contractor. Any subsequent changes shall be delivered to NASA.

d) The contractor shall produce documents in both English and Russian using software and fonts commonly used by NASA and Rosaviakosmos. These documents can include text and graphic representations. The contractor shall also produce meeting presentation materials or hard copies of electronic documents, as requested via the NASA TRF. The contractor shall maintain an electronic library of all translation products with NASA access for viewing, searching and retrieval using key words, subject, title, and date. The contractor shall provide limited access for sensitive/confidential translation in accordance with the NASA TRF identification.

e) The contractor shall have the capability to transmit and receive documentation electronically, to and from various locations in the U.S. and in Russia. The electronic mail system used by the contractor must be compatible with the system used by NASA. Industry standard transmission times for fax and e-mail shall be utilized. NASA will provide E1/T1 standard interface to/from the Moscow region. A subject line, which is representative of the document translated, shall be included with the response.

f) Safety and mission critical translation tasks are a subset of the translation work to be performed by the contractor. Tasks that are non-continuous safety and mission critical tasks will be identified by NASA on the TRF. Continuity of contractor personnel performing these services is recommended. Safety and Mission critical tasks include but are not limited to the

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following:**1) Mission Control Translations**

Contractor personnel performing this service shall provide daily translation in support of Mission Control Centers. Contractors supporting real-time mission operations shall be certified and be proficient in both interpretation and translation. NASA and the contractor will jointly administer certification training in accordance with the Interpreter Training and Certification Guide (JSC-36455). NASA will retain final approval of certification upon satisfactory completion of the training. The same contractor personnel that provide translation services for specified real-time mission operations shall provide translation services for those operation simulations for that mission.

2) Data File Translations

Contractor personnel performing this service shall provide daily translation in support of mission planning and procedures development. This service is critical due to the unique terminology, formats, and computer systems used in Operation Data File (ODF), Flight Data File (FDF) and Flight Rule development. NASA and the contractor will jointly administer certification training in accordance with the Interpreter Training and Certification Guide (JSC-36455). Contractors supporting ODF translations shall be certified. NASA will retain final approval of certification upon satisfactory completion of the training.

3) Spacecraft Software Related Translations

Services in this area involve using terminologies in the areas of ADA software, data buses and instrumentation, software development, test environments, and general command and data handling.

g) The contractor shall:

- 1) Provide an ISO-9001: 2000 certified workflow process to provide translations, editing, quality assurance, and configuration control.
- 2) Provide an additional level of QA for safety and mission critical translations through the use of Subject Matter Experts.
- 3) Utilize a Glossary Browser to augment the ISS Lexicon for ensuring the most accurate terminology is used in translated products.
- 4) Minimize dependence on overtime pay and freelancers to respond to short notice requests and surges by sharing the mission operations translation workload between

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Houston and the MCC-Moscow and utilizing interpreter resources when available/appropriate.

- 5) Screen all translations for duplicate translation requests and notify NASA in order to eliminate redundant work.
- 6) Coordinate deadlines with NASA COTR or designee for lower priority/non time critical translations when completion of time critical translations would result in overtime.

1.5.1.2 Interpretation (IDIQ)

The contractor shall interpret Russian to English and English to Russian conversations, required to conduct vehicle integration and development, operations, maintenance/sustaining engineering, and R&D on the ISS. This includes support to biomedical research, physics experiments, fluid dynamics research, earth sciences research, and astronomical research. The contractor also interprets Mission Control Center commands. This has proven to be critical to the successful implementation of U.S. and IP R&D onboard the ISS. One meeting unit equals one hour of interpretation service.

- a) Interpretation shall flow smoothly in a professional manner without compromising accuracy and safety and without interruptions to the event for which interpretation service is being provided. The contractor shall be knowledgeable in technical areas to be interpreted prior to the meeting event to minimize disruptive questioning. All interpreters under this contract shall have, as a minimum, Foreign Service National (FSN) 210-8 Translator Series Embassy standard skill level. The contractor shall provide inputs and recommendations to the ISSP Lexicon as required.
- b) Interpretation shall be provided in scheduled and impromptu meeting events (telecons, meetings, and other types of business gatherings). Meeting events can vary from a short discussion between individuals up to a multiple-week event with numerous participants and many simultaneous agenda activities.
- c) The contractor shall provide Russian to English and English to Russian interpretation, including simultaneous interpretation when required via a Meeting Support Request Form (MSRF) (Appendix H, Form 1) or electronic equivalent. The contractor shall deliver services measured by meeting units. A meeting unit is defined as a meeting hour for which the interpretation services of one individual are provided.
- d) The contractor shall provide continuous support interpretation for key operational positions. Interpretation services shall be required on a 24-hour per day basis for specified positions. The continuous support interpreters will not require a MSRF. Continuous support interpretation include but are not limited to the tasks defined in section 1.5.1.1.f) 1 and 2 and

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1.5.1.2 f) items 1, 2 and 5; g).

e) The contractor shall use MCC-M interpreters to support TIMs in Moscow as directed by NASA.

f) Safety and mission critical interpretation tasks are a subset of the interpretation work to be performed by the contractor. Tasks that are non-continuous safety and mission critical tasks will be identified by NASA on the MSRF. Continuity of contractor personnel performing these services is recommended. Safety and Mission critical tasks include but are not limited to the following.

1) Mission Control Interpretation

Interpretations associated with flight operations are critical to the safety of the flight crew and to the success of the mission. Each employee supporting real-time mission operations shall be certified and be proficient in both interpretation and translation. NASA will define specific interpretation tasks which will include but not be limited to Space to Ground voice loops, Flight Director, CAPCOM support and ISSP Mission Management Team (IMMT). NASA and the contractor will jointly administer certification training in accordance with the Interpreter Training and Certification Guide (JSC 36455). NASA will retain final approval of certification upon satisfactory completion of the training.

The same interpreters that provide interpretation services for specified real-time mission operations must support any simulations for that mission.

2) Consultant Team Interpreters

The contractor shall provide certified interpretation for consultant teams the entire time they are present in the respective MCC's. NASA and the contractor will jointly administer certification training in accordance with the Interpreter Training and Certification Guide (JSC 36455). NASA will retain final approval of certification upon satisfactory completion of the training.

3) Spacecraft Software Related Interpretation

Interpretation support that is directly related to development of spacecraft software is considered a safety-critical task. This task requires extensive use of ADA software terminology. In addition, extensive use of data bus, instrumentation, software development, test environments, and general command and data handling terminology is required.

4) Science Related Interpretations

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Interpretation support related to in-flight and ground-based R&D is considered a safety-critical task. This support includes interpretation during the planning, training, and operation of experiments involving human subjects or human operators.

5) Crew Training

Interpreters supporting certain crew training tasks also require training and certification in accordance with the Interpreter Training and Certification Guide (JSC-36455). Crew training tasks requiring certification include, but are not limited to the following:

- EVA activities in the Neutral Buoyancy Lab in Houston
- EVA activities in the Star City Hydrolab
- Russian Vacuum Chamber
- Classroom training on U.S. segment systems for cosmonauts
- Robotics training for cosmonauts in U.S. facilities

g) Additional duties shall be performed by the continuous support contractor in MCC-M when HSG personnel are not present including facilitation of discussions, answering the phone, voice-loop calls between control centers, document retrieval, translation and distribution of documentation, and peer QA of MCC-M translations.

1.5.1.3 Russian and English Language Training

a) The contractor shall follow the NASA approved language-training curriculum. The contractor shall deliver Russian and English language training at beginner, intermediate, and advanced levels. NASA shall provide the training requirements defined in terms of classroom hours and objectives. The contractor shall develop and deliver Russian and English language supporting lesson plans and training curriculums, to effectively train and prepare employees for ISS and Space Shuttle space flight, operations, maintenance/sustaining engineering, and R&D as described in Language Training Curricula for NASA/JSC Contractor Programs (DRD B-II-01). The training shall consist primarily of group and individual tutorial part-time classes (i.e. classes of less than 4 hours per week). The contractor shall provide copies of training materials such as books and handouts as requested by NASA and as needed by the language-training instructors. The contractor shall utilize available ISS and STS mission audio and video to create learning materials for language training.

b) The contractor shall provide Russian and English as a Second Language (ESL) training primarily at JSC. Russian language training shall also be provided at the Volga apartments and NASA offices in Moscow, at the TsUP in Korolev, and at Star City as described in Language Training Curricula for NASA/JSC Contractor Programs (DRD B-II-01).

c) The contractor shall make available a language training materials library for Russian and English students and instructors. Existing materials will be provided per SOW Section J-1, Appendix D. Supplemental materials shall be developed and provided by the contractor on an as

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needed basis. Language training program reports and students records including attendance rosters and course evaluations shall be provided to NASA as described in Language Training Shared Materials "File Cabinet" (DRD B-II-02). The contractor shall provide a JLEC website allowing 24/7 access for students reducing the need for hardcopy training materials at their office and/or home and to provide a portal for communication with JLEC faculty and staff in Russian and the U.S.

- d) One teaching unit equals one hour of language training.

1.5.1.3.1 JSC Language Education Center (CF)

The contractor shall provide clerical and administrative services to the JSC Language Education Center (JLEC) for center wide language training and crew member language training, including tracking of library materials and new resources, coordinating production of the Language Newsletter with NASA, updating and providing assistance on the language web page, maintaining classroom reservation book, schedule and course sessions, maintaining student/instructor records as described in Training Report Deliverable and Student Records (DRD B-II-03 and DRD B-II-04), and maintaining the Russian Information Bulletin Boards. Crewmember records (including portfolio testing) shall be entered and updated using the JSC Intranet based database called Crew Language Training Metrics.

1.5.1.3.2 Crew Language Training (IDIQ)

- a) The Contractor shall integrate English and Russian language training capabilities between the Gagarin Cosmonaut Training Center (GCTC) in Star City, Russia and RSC-Energia in Korolev, Russia and the JSC in Houston, Texas, to enable seamless training independent of location Language Program Plan for Integration with Colleagues in Russia (DRD B-II-05).
- b) The Contractor shall provide language training for astronauts and limited numbers of other personnel in Houston and Russia. The Contractor shall also administer and implement English language training for cosmonauts and other Contracting Officer's Technical Representative (COTR) approved individuals (e.g., Flight Controllers) under curriculum developed by the Contractor per NASA guidelines. In addition, the Contractor shall coordinate training plans, materials, curriculum, schedules, and other details with Russian language trainer (Russian and English instructors), and provide consistent training for astronauts, cosmonauts and other named personnel.
- c) Portfolio testing shall be performed according to the defined Portfolio testing for crewmembers scheme. The scheme has four parts, which are Oral Proficiency Interview (OPI), Teacher's Informal Evaluation, Student Self Evaluation and Instructor Observation of Technical Use of Language. Initial testing shall be conducted when it is estimated that the astronaut or cosmonaut has reached the novice-high or intermediate low level.

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d) The contractor shall actively develop new language training materials as the ISS build out continues (e.g., robotics relevant terminology and language usage materials are developed and used in the Russian and English language training program).

e) The contractor shall use the Near Immersion language training technique on select crewmembers.

1.5.1.4 Logistics

Logistics services shall be responsive, uninterrupted, safe and timely.

1.5.1.4.1 Transportation Services (IDIQ)

The contractor shall provide ground transportation and chauffeur services for U.S. and Russian personnel as required. The contractor shall also pick up, receive, and deliver documents for conducting ISS business approved by the COTR or designee. Transportation services shall be provided on time and in a manner that ensures the safety of the passengers. One transportation unit equals one driving hour.

a) Nominal transportation shall include: airport pickup and drop-off transportation for U.S. travelers in Russia, long-term U.S. representatives in Russia, and Russian travelers in the U.S. The contractor shall also provide transportation between hotels and meeting locations for U.S. travelers in Russia and for Russian travelers in the U.S.

b) The contractor shall provide chauffeur services for Government furnished vehicles in the Moscow region. Chauffeurs for HSFP-R shall have U. S. Embassy access clearances and, when required, approval from the Star City Russian military for access to facilities to Star City and to the GCTC.

1.5.1.4.2 Meeting Services (LOE)

The contractor shall be required by MSRF (Appendix H, Form 1) to coordinate meeting schedules, prepare agendas, protocols and notes and distribute meeting information.

1.5.1.4.3 Travel Services (LOE)

In Russia, the contractor shall coordinate and support select official travel as directed by COTR or designee. This includes, but is not limited to, disseminating important travel information (for example, the Arrival Notification Form (ANF) (J-1, Appendix H, Form 5) and traveler matrix), coordinating travel plans (not to include purchasing tickets), preparing travel notifications, and coordinating policy or protocol matters.

The Contractor shall provide services in obtaining U.S. and Russian visas and others as required. The contractor shall coordinate directly with the International Relations Office (NASA/Code I)

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regarding all Russian and American visitor requests. The contractor shall maintain visitor files of both Russian delegations to the United States and American delegations to Russia, contribute to the weekly visitors list for the NASA Moscow Liaison Office (NMLO), and communicate with Rosaviakosmos on questions concerning visas. Other contractor duties shall include preparation and assurance that visa applications and extensions are processed, assistance with lost visas and passports and preparation of invitation letters. Contractor clerical support at Star City shall assist with these duties as needed to help coordinate travel to and from the Star City location. In the United States, the contractor shall prepare and ensure visa applications are processed for NASA contractor personnel who will travel to Russia.

1.5.1.4.4 Liaison and Administrative Services (LOE)

The contractor shall serve as a liaison between U.S. personnel and Russian organizations, Russian personnel, and other U.S. personnel and organizations in the U.S. and Russia. This position will be located in Moscow, Russia, in support of NASA representatives both resident in Russia and visiting. Specific tasks include scheduling meetings with Russian management, interpretation and translation as necessary, and transferring information between NASA and Russian management as needed. This position will coordinate directly with the Director, HSFP-R, and will be located at the NASA office in the Rosaviakosmos building in Moscow.

The contractor shall provide the administrative, property and clerical support necessary to perform the logistics services specified in this SOW. Additionally, the contractor shall provide administrative and clerical support to the HSFP-R including the NMLO.

In the Moscow region the contractor shall be responsible for office management, travel and visitor coordination, personnel management, financial tracking, procurement, and office communications. These activities involve international office management and operations. In addition, clerical and secretarial support, as an interface between NASA and Russian organizations, shall be responsible for scheduling, mail handling, and preparation of correspondence and reports, etc. HSFP-R contractor personnel must communicate in English and Russian, and must pass an Embassy background check. The Star City Russian military must approve all Star City contractor personnel.

1.5.1.4.5 Other Related Support (LOE)

The contractor shall maintain the capability, primarily in Russia, to procure miscellaneous materials or services as required by NASA including but not limited to the types of business and office related materials that are required for conducting normal course of business in Russia.

1.5.1.4.6 Astronaut Office Support (LOE)

The JSC onsite contractor shall support travel to Russia for astronauts and their dependents and act as point of contact for family support to, within, and from Russia. The support shall include but not be limited to the following:

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Tracking of astronaut Russian travel by its personnel to include dates of travel, tickets, limousine service in Houston, and pickup in Russia, coordination with the International Travel Office, preparation of Letters of Invitation (LOI) for each trip utilizing the International Travel Database (ITD). Tracking of all visa currencies, Multiple Entry Visa (MEV) or Dual Entry Visa (DEV) types, and official passport currency for all personnel, to include family members utilizing the ITD and processing visa requests. Tracking dependent inoculation, passport and required information such as contact phone numbers or other data for the families of ISS assigned crew members for early processing utilizing the ITD.

The contractor shall comply with the Crew Office travel procedures (reservations, regulations) in preparation of travel arrangements to include hotel (Volga, Star City, Moscow Renaissance Hotel (Penta), etc), rental car, airplane reservations, orders, ground transportation, etc. Upon return of travelers from Temporary Duty (TDY), complete voucher for traveler signature and approval and maintain travel files on all travelers, i.e., vouchers, orders, receipts.

- a) The contractor shall coordinate with Star City on Russian Familiarization Training schedules and the Expedition Corps and the Flight Crew Office, in order to develop projections of Russian travel for planning purposes.

1.5.1.4.7 International Operations Liaison Office Support (LOE)

The contractor shall provide on site support for the Houston Support Group (HSG) and for the Moscow Support Group including administrative support, badging, and scheduling by performing the following tasks:

- a) At JSC, the onsite contractor support shall include but not be limited to:

Assistance in processing of security clearances, badge paperwork and computer account paperwork (including email accounts) for foreign nationals supporting the ISSP. Assist the Manager of the International Operations Liaison Office with activity report compilation, weekly activities schedule, export control compliance, and logistics assistance in support of HSG operations. Identification of upcoming travelers and assistance in the processing of the LOI's for HSG and Backup Control and Center (BCC) travelers utilizing the ITD. Maintenance of the HSG library including shipping of documents and office supplies for HSG. Maintenance of the HSG and Russian Interface Officer (RIO) web pages. Coordination of HSG and Russian Simulation Execution Team (RSET) support for MCC-H simulations.

- b) At MCC-M (TsUP) the onsite contractor support shall include be not be limited to:

Assistance with the same tasks as defined in 1.5.1.4.7 a), administrative and technical interpretations and translations as directed by NASA, maintenance of a log of all translations by MCC-M (HSG and MTLO) translators, administration of a quality control program for all translations and posting correspondence translations to the NASA/IP

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Correspondence website. Tracking MCC-M interpreter/translator training and provision of a monthly status report to the International Operations Liaison Office manager.

1.5.1.4.8 International Partners Office Russian Translation Coordination Support (LOE)

The contractor shall provide JSC on site support to:

- a) Receive, log, seek MIC COTR or designee approval, and process all incoming translations from NASA and/or NASA's contractor(s).
- b) Receive, log, distribute all completed translations received from the contractor off site facility and ensure translations are archived at the offsite facility.
- c) Maintain and distribute weekly incoming and outgoing informal Russian correspondence logs.
- d) Facilitate and resolve translation related issues as needed.

1.5.1.4.9 Russian Elements Office Telecon/Videocon and Travel Coordination (LOE)

The contractor shall provide JSC on-site support with telecons/videocons coordination for Russia. This shall include assigning Russian conference rooms at RSC-E that have NASA Integrated Services Network (NISN) teleconference lines, providing notification to the NASA long distance/telecon service provider of numbers to be connected, and arranging interpreting support. It should be noted that teleconferences conducted with the MCC-M usually only require the contractor to coordinate interpreter support. The contractor shall provide a daily notification of meetings to Russia, the communication provider, and the interpreting provider. A monthly report of all telecons/videocons is to be provided to NASA.

The contractor shall provide JSC on-site support to coordinate ISS Program Office travel to/from Russia in accordance with the Russian Travel Management Directive, MD-114. This shall include providing the Deputy Russian Elements Integration Manager with Russian travel requests for approval, generation of LOI's, and coordination of planned travelers with the NASA HSFP-R utilizing the ITD.

The contractor shall develop monthly, quarterly and yearly travel reports utilizing the ITD that include number of trips per organization, number of travel days per organization, travel costs per organization for all ISSP International travel. These reports shall be provided to the Russian Elements Integration office manager or designee. The contractor shall be able to administer input to the ITD and provide feedback to the ITD NASA manager concerning the utility of the database and suggestions and recommendations for improvement.

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1.5.2 International Mission Integration

The International Mission Integration services provide International Shipping Coordination, Ham Radio project support to ISS mission and Joint Cargo Certification. Contractor services shall include technical support as well as administrative support tasks as defined in 4.1 e and f.

1.5.2.1 International Shipping Coordination (CF)

The contractor shall provide support to coordinate International shipments associated with ISS operations, maintenance/sustaining engineering, and R&D activities. This shall include both Flight and non-Flight shipments.

1.5.2.1.1 JSC Shipping Coordinator

The on-site contractor shall:

- a) Be responsible for working with existing or establishing new counterparts with the IP's in order to coordinate and arrange the schedules for shipments.
- b) Provide weekly schedules of shipment status. Status' are to be produced and delivered to NASA Russian Elements Integration Office Manager or designee.
- c) Perform Book Coordinator function for the following Bilateral Hardware/Software Exchange Agreement Lists (BHSEALS) which define the processes and requirements for shipping items to/from the IP's, including applicable Customs information: NASA/RSA Bilateral Hardware and Software Exchange Agreements, Lists, and Schedules (SSP 50136), NASA/ASI Bilateral Hardware and Software Exchange Agreements, Lists and Schedules (SSP 50219), NASA/CSA Bilateral Hardware and Software Exchange Agreements, Lists and Schedules (SSP 50220), NASA/NASDA Bilateral Hardware and Software Exchange Agreements, Lists and Schedules for the Japanese Experiment Module (JEM) (SSP 50264), NASA/ESA Bilateral Hardware and Software Exchange Agreements, Lists, and Schedules for Columbus (SSP 50289), NASA/ESA Bilateral Hardware and Software Exchange Agreements, Lists, and Schedules for Cupola (SSP 50408), NASA/RSA Bilateral Agreement: Shipping/Receiving Process for ISS Flight Hardware (SSP 50576).
- d) In addition to performing Book Coordinator function, the contractor will be required to develop the following bilateral documents: NASA/NASDA Bilateral Hardware and Software Exchange Agreements, List, and Schedules for the H-II Transfer Vehicle (SSP 50615), NASA/NASDA Bilateral Hardware and Software Exchange Agreements, Lists and Schedules for the Centrifuge Element (Main Body) (SSP 50616). The documents shall be formatted to be consistent with the other BHSEAL documents.
- e) Provide information to the ISS community on the process for shipping items to IP's including JSC policies, Customs requirements for all involved countries and recent changes to

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these processing requirements.

f) Review shipping paperwork (i.e. Pro Forma Invoices (JSC Form 1735), JSC Form 290's, etc.) to validate consistency with other program documentation and completion of all required data and signing as the ISS shipping coordinator when required. Deficiencies shall be identified to the initiator immediately for correction with notification to the NASA POC. The shipping coordinator will notify the NASA POC, immediately, if a scheduled shipment is not going to meet its required delivery date.

1.5.2.1.2 Moscow Shipping Coordinator

The contractor shall provide liaison service in Russia for the shipment of NASA equipment and personal goods into and out of Russia and Kazakhstan. This service involves interfacing with Russia and U.S. customs procedures and regulations, and Russia and U.S. organizations involved in, and required for, efficient shipment and delivery of NASA items. This service does not include the actual shipping of goods or payments related to shipment. The contractor shall serve as an interface between NASA and Rosaviakosmos technical personnel, NASA transportation department personnel, Embassy personnel, and the shipping companies. In addition, the contractor shall log incoming and outgoing shipments, and track the progress of deliveries.

1.5.2.2 Reserved

1.5.2.3 ISS Ham Radio Project (CF)

The ISS Ham Radio project supports the ISS mission by providing the following functions; education outreach, crew psychological health, R&D communication experiments, and ISS emergency contact. The JSC on-site contractor shall assist the ISS Program Office Ham Radio Lead as described below:

a) The contractor shall serve as the ISS Ham Radio technical team representative. In this capacity, the contractor shall attend Amateur Radio on International Space Station (ARISS) and ISS Ham Radio technical team meetings. The contractor shall coordinate resolution of actions for these meetings. The contractor shall develop and maintain schedules of planned Ham Radio activities, which include planned school contacts, Technical Interchange Meetings (TIM's), testing milestones, and other major event dates. The schedule shall be provided to NASA on a monthly basis. Reference Integrated Mission Integration Office Schedules (DRD B-PC-06).

b) The contractor shall coordinate the addition of Ham Radio hardware for delivery to the ISS. This shall include the preparation of Manifest Requests (MR) for having hardware added to the Shuttle, Progress, Automated Transfer Vehicle (ATV), and H-II Transfer Vehicle (HTV) manifests. The contractor shall coordinate the shipment of Ham Radio hardware with the ISS International Shipping Coordinator.

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- c) The contractor shall support Safety reviews for Ham Radio hardware and coordinate required information with the appropriate IP.
- d) The contractor shall perform ISS and Shuttle crew training for the Ham Radio. This shall include maintaining a list of licensed and to-be-trained astronauts. It shall also include developing training materials and reviewing training plans and documents created by external organizations (such as MOD) to ensure Ham Radio content is accurate.
- e) The contractor shall coordinate crew schedules with the Flight Control Team (FCT) to support ISS Ham Radio Operations. The contractor shall track ISS crew contacts with participating schools. The contractor shall write daily summaries and create bulletin boards summarizing daily ISS Expedition activities.

1.5.2.4 Joint Cargo Certification Team (JCCT) (LOE)

The contractor shall provide engineering and administrative products and services for development and implementation of the ISSP bilateral and multilateral cargo certification process and operation of the JCCT. The development and implementation is conducted through TIM's, videoconferences, teleconferences, email and faxes with the IPs. The current bilateral cargo certification process is defined in International Space Station Cargo Certification Process (SSP 50578) which shall be book coordinated by the contractor. The contractor shall provide development and negotiation of manifest analysis protocols, hardware certification protocols, joint test procedures, technical requirements, data exchange, hardware certificates, CoFR certificates, and readiness review presentations.

1.5.2.5 Export Management (CF)

The contractor shall develop an Export Control Plan (DRD B-EC-02) to define the approach that shall be used for export control. Audits shall be conducted annually to review compliance with export control regulations and reported according to Export Control Audit Results (DRD B-EC-01).

The contractor shall designate an export control representative (ECR). The ECR shall determine classification of all export commodities and whether NASA existing license exceptions or exemptions can be used. The ECR shall administer and control logs of export activities consistent with the MIC Export Control Plan and associated export compliance requirements. Export control logs shall be maintained and include as a minimum, commodities classifications, license information, transaction status, compliance activities and records of process completion for license exceptions or exemptions.

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1.6 HUMAN SPACE FLIGHT COLLABORATION (LOE)

The contractor shall accomplish all work necessary to accommodate commercial customers to the ISS. The work will be the same or similar scope already required elsewhere in this contract SOW but will be performed in support of a NASA Reimbursable Space Act Agreement.

2.0 RESERVED

3.0 RESERVED

4.0 OPERATIONS

4.1 Mission Integration

Many of the Mission Integration functions are associated with ISS transportation vehicle traffic and on-orbit ISS operations, which have been ongoing for the ISSP and must continue seamlessly by the contractor upon contract award.

The contractor shall initiate and proceed with open work on all tasks and functions based upon their status at the time of contract transition. The contractor shall address in their management transition and technical plans how to accomplish this requirement.

a) Correspondence and communications with the International Partners and Participants are integral components of the tasks and functions listed in this section. The contractor shall adhere to the program policies, requirements and processes identified in Section 1.5 and Export Control regulations for all International Partner and Participant correspondences and communications. The contractor shall log and archive all International Partner and Participants correspondences and communications and provide the records upon request. The records for written communications shall, at a minimum, include date of receipt or transmittal, originator, recipient, subject, copy of the actual correspondence, and tracking number. Verbal communications including telecons, videocons and phone conversations shall also be documented and records retained according to export control regulations (currently 5 year archival requirement).

b) Although the functions identified within this SOW have a historical foundation, the ISSP is still an evolving program that can benefit from efficiencies and improvements realized by an experienced and dedicated team. The contractor shall contribute to process improvement efforts for all of the tasks and functions identified in this contract, including recommendations and evaluations for improvements with other programs and contracts that affect the tasks in this contract.

c) The contractor shall ensure consistency across all products for those tasks repeated for multiple flights and increments, between related or dependent tasks within this section of the SOW, and between related or dependent tasks from other programs or contracts.

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d) The contractor shall provide the “Book Coordinator” function for multiple program documents as defined throughout Section 4.1 of this SOW. This is a key program task that provides for developing new documents or updates to existing documents to and includes the following tasks:

- 1) Establish document schedule with NASA agreement Integrated Mission Integration Office Schedules (DRD B-PC-06).
- 2) Integrate inputs from technical experts, coordinate updates between submitters and reviewers, document issues and resolutions, and maintain the technical consistency of the document.
- 3) Update the document through the ISS CM process (reference 1.3) including DQA process, per the agreed upon template in the ISS Mission Integration Template (MIT) (SSP 50489) (or NASA approved schedule). This includes:
 - Integrating inputs, identifying discrepancies, and tracking communications from the partners regarding the documents. For documents that affect Russia, development of Notification of Document Changes (NDC's) and coordinating translations when required.
 - Organizing and conducting formal meetings to evaluate the changes, distribution of minutes and actions, and tracking closures.
 - Developing and making presentations to the Mission Integration and Operations Control Board (MIOCB) as required for document Change Request (CR) approvals.

e) The contractor shall provide meeting support for Mission Integration functions in coordination with the technical teams and offices. An example of teams and support required is provided in Appendix G. Tasks shall include:

- 1) Scheduling of telecons, TIMs and meetings including coordination of interpretation support as required.
- 2) Organization of meeting logistics, such as conference rooms and telecons, preparation of meeting materials, and ensuring necessary equipment is available and set up.
- 3) Attendance at meetings as required to collect minutes and action item information including assignment, notification to assignees, and documentation of status and closures.
- 4) Maintenance of team and meeting Points of Contact (POC) lists, distribution lists and team calendars of events.
- 5) Development and distribution of the agendas, action item lists and minutes, as well as notices of events and other pertinent information

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f) The contractor shall develop and curate web page content for specified MIO teams and organizations. The contractor shall provide web site administration, web site design, and post new information to the websites. The contractor shall develop and provide web pages in accordance with the NASA Johnson Space Center policies. Website content shall contain schedules, points of contact, work instructions, products and other team unique content as specified.

g) The contractor shall adhere to the program policy, requirements, and processes defined in the following documents:

- 1) SPIP Volume 1 (SSP 50200-01)
- 2) Station Program Implementation Plan (SPIP) Volume 2 (SSP 50200-02)
- 3) International Space Station Program Certificate of Flight Readiness (CoFR) Process Document (SSP 50108)
- 4) Generic Groundrules, Requirements and Constraints Part I: Strategic and Tactical Planning (GGR&C, SSP 50261-01)
- 5) Space Station Reference Coordinate Systems (SSP 30219)
- 6) Post Mission Guidelines (SSP 50168)

4.1.1 Mission Requirements and Planning**4.1.1.1 Increment/Stage Integration (CF)**

A maximum of one Increment Definition and Requirements Plan (IDRP) and three Increment Definition and Requirements Document for Planning Period x (IDRD PPx) will be in process at any given time. A description of increments, planning periods, the overlapping schedules of planning periods, and the interrelationships of the Increment Definition and Requirements Documents (IDRD) documentation is provided in Appendix F. A typical increment team consists of a dedicated NASA Increment Manager (IM) and NASA Increment Engineer (IE), a dedicated contractor IE, a shared IDRP/IDRD PP Book Coordinator, and a shared Technical Integrator (TI). The Increment Definition and Requirements Document Flight Program (IDRD FP) is maintained and updated on a continuous basis to coordinate and manage integrated ISS planning across planning periods as launch dates and the assembly sequences change.

4.1.1.1.1 IDRP and IDRD Documentation (CF)

The purpose of the IDRP and IDRD documentation function is to record and control the integrated multilateral visiting vehicle schedules and requirements, resource allocations, top level

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flight manifests, and program level requirements and priorities for a planning period. The baselined content of the IDRP and IDRD's provides programmatic direction to the implementing execution level organizations.

- a) The contractor shall perform the IDRP and IDRD documentation tasks in accordance with the tactical processes defined in SPIP Volume 1 (SSP 50200-01) Section 3.7 and SPIP Volume 2 (SSP 50200-02) Sections 3.0, 5.0, and 5.1.
- b) The contractor shall organize and conduct, upon request by the NASA Increment Manager, International Partner (IP) telecons and TIMs to integrate data inputs, identify discrepancies, and obtain agreement for content of documents listed in this section. This includes the development and distribution of agendas, minutes, discussion and presentation material, action status tracking, CM paper flows and protocols. The telecons nominally occur once per week while TIMs are nominally scheduled once every 4 months.
- c) For the Increment Definition and Requirements Document Blank Book (IDRD BB, SSP 54002), the contractor shall:
 - 1) Book Coordinate the IDRD BB (SSP 54002) in accordance with the definition in Section 4.1(d).
 - 2) Process updates and changes nominally two times per year. The contractor shall develop changes to the implementation plans and schedules upon request by NASA.
 - 3) Evaluate and recommend formats compatible with data that are obtained from input sources and topics common across planning periods including the Operations Summary (SSP 50112) or ISS performance, resources, and consumables formats generated by the PI&C contract if the Operations Summary has not been updated, Multi-Increment Manifest (MIM, SSP 50110), IDRD FP (SSP 54100), Program Board action items and directives, IP correspondence and execution level organization requests.
- d) For the IDRD FP, SSP 54100, the contractor shall:
 - 1) Book Coordinate the IDRD FP (SSP 54100) in accordance with the definition in Section 4.1(d).
 - 2) Process updates and changes nominally 24 times per year to maintain integrated ISS planning across planning periods as launch dates and the assembly sequence change. The contractor shall develop changes to the implementation plans and schedules upon request by NASA (reference DRD B-PC-06). As a flight is completed the associated information is retained in the historical section of the document.
 - 3) Collect and collate proposed changes from sources including the MIM (SSP 50110) Change Notices, the sanctioned Integrated Flight Schedule (IFS), GGR&C (SSP 50261-

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01), International Partner correspondences, Program Board action items and directives and on-console records of as-performed visiting vehicle data.

e) For the IDRP, the contractor shall:

- 1) Develop the planning period specific IDRP in accordance with the format requirements in IDRD BB (SSP 54002). Upon approval by the Requirements Integration Panel (RIP), the contractor shall prepare the IDRP for distribution under NASA letterhead.
- 2) Deliver the IDRP in accordance with the schedule requirements documented in ISS Mission Integration Template (MIT), SSP 50489 or an increment specific schedule approved by the RIP. The contractor shall develop changes to the implementation plans and schedules upon request by NASA (reference DRD B-PC-06).
- 3) Collect and collate proposed IDRP data from authorized sources including the Operations Summary (SSP 50112) or ISS performance, resources, and consumables reports generated by PI&C contract if the Operations Summary has not been updated, GGR&C (SSP 50261-01), MOD Operations Baseline Documents for the appropriate flights, and Requirements Request Forms as defined in MIDS BB SSP 50622-02, Section 4.

f) For the IDRD for PP xx (SSP 541xx), the contractor shall:

- 1) Book Coordinate the IDRD PPxx (SSP 541xx), where xx is nominally the number of the specific planning period starting with the number 00, in accordance with the definition in Section 4.1(d), the format in the IDRD BB (SSP 54002) and the increment specific IDRP (note that the numbering scheme may be deviated from in off-nominal situations).
- 2) Deliver the document in accordance with the schedule in the MIT (SSP 50489) or an increment specific schedule approved by the Increment Manager, plus updates once per month from Increment start minus 3 months through increment completion. The contractor shall develop changes to the implementation plans and schedules upon request by NASA (reference DRD B-PC-06).
- 3) Validate approved document contents and develop CoFR review presentations upon request by the Increment Manager in accordance with the requirements in ISSP CoFR Process Document (SSP 50108) and MIO work instructions.
- 4) Collect and collate proposed changes from authorized sources including the flight and stage specific MOD Operations Baseline documents, GGR&C document (SSP 50261-01), Operations Summary document (SSP 50112) or ISS performance, resources, and consumables reports generated by PI&C contract if the Operations Summary has not been updated, IDRD FP (SSP 54100), IDRP (SSP 541xx), IDRD Annexes 1, 2, 3, 4, and 5 (SSP 541xx-ANXyyy, SSP 541xx-ANX2, SSP 541xx-ANX3, SSP 541xx-ANX4, and SSP 541xx-ANX5, respectively), ISS Program Off-Nominal Situation Plan (IPOP, SSP

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50562), Station Development Test Objective Catalog (SDTOC), SSP 50448, Requirements Requests Forms, Program Board action items and directives, Launch Package Manager inputs and IP correspondence.

g) The contractor shall develop, manage, and update the website content of the IDRP, IDRD FP, IDRD BB, and IDRD PP documentation and their related information as defined in 4.1(f).

4.1.1.1.2 Generic Groundrules, Requirements and Constraints (GGR&C, SSP 50261-01) (CF)

The GGR&C documents and baselines the program approved groundrules, requirements, and constraints that apply to ISS traffic planning, crew training, medical, crew rotation, resources and accommodations, and crew time requirements for strategic, tactical, and execution planning (SSP 50200-02 SPIP Volume 2, Section 4.0).

a) The contractor shall book coordinate the GGR&C Part 1 (SSP 50261-01) in accordance with the definition in Section 4.1 (d).

b) The contractor shall process changes once every 2 months. The contractor shall develop changes to the implementation plans and schedules upon request by NASA.

c) The contractor shall organize and conduct, upon request by the RIP Chairperson, International Partner telecons and TIMs to integrate data inputs, identify discrepancies, and obtain agreement for content of the GGR&C. This includes the development and distribution of agendas, minutes, discussion and presentation material, action status tracking, CM paper flows and protocols. The telecons and meetings are nominally integrated with the telecons and meetings of Section 4.1.1.1.1 IDRP and IDRD Documentation.

d) Upon request by the NASA RIP Chairperson, the contractor shall organize the development, integration and documentation of studies leading to the resolution of issues associated with the proposed GGR&C changes. This includes the development and coordination of meetings, agendas, presentation material, and action tracking status.

e) The contractor shall develop, manage, and update the website content of the GGR&C documentation and its related information as defined in 4.1(f).

f) The contractor shall review submitted Requirements Request Forms for completeness and feasibility and provide recommendations to the RIP chairperson(s). Upon concurrence from the RIP chairperson, post to the RIP website for RIP member review.

4.1.1.1.3 Station Development Test Objectives (SDTO's) (CF)

The contractor shall perform the following tasks in support of managing the approval, documentation, execution planning, implementation, results reporting, and archival of SDTOs

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and joint Shuttle and ISS SDTOs or DTOs. The SDTOC (SSP 50448) contains process and schedule information as well as approved SDTO/DTOs.

The contractor shall:

- a) Book Coordinate the SDTOC (SSP 50448) in accordance with the definition in Section 4.1(d) and the processes in SPIP Volume 2 (SSP 50200-02) Section 5.3 and the SDTOC (SSP 50448).
- b) Implement the joint change processes for Space Shuttle Program Development Test Objectives (DTOs) and SDTOs that affect both the Space Station and the Shuttle in accordance with the processes identified in SDTOC (SSP 50448).
- c) Process changes to the SDTOC (SSP 50448) sections addressing processes and schedules once per year. Changes shall include SDTO/DTO proposals from SDTO/DTO initiators as well as inputs collected from the Space Shuttle Program DTO lead; chits, program board actions and directives, and International Partner correspondence (nominally 10 to 20 proposals per year). Completed SDTO/DTOs shall be archived using one change per year. The schedule shall be approved by the NASA SDTO POC.
- d) Develop and coordinate SDTO Working Group (WG) agendas and minutes and upon approval by the NASA SDTO WG lead, distribute the agendas and minutes. This function includes soliciting and coordinating agenda topics with team members and participants, delivering or coordinating the delivery of meeting documentation and materials, and confirming meeting location, participants, and time. Agenda item sources include open actions, status reports, issues coordination and resolution, and WG member and participants requests.
- e) Upon request by the NASA SDTO WG lead, conduct the SDTO WG meetings.
- f) Organize and conduct upon request by the NASA SDTO WG lead, International Partner telecons and TIMs to integrate comments, identify discrepancies and obtain agreement for content of the documents listed in this section. This includes the development and distribution of agendas, minutes, discussion and presentation material, action status tracking, CM paper flows and protocols.
- g) Coordinate, track, and document the execution planning and implementation of approved SDTO/DTOs through the RIP, Increment Management Teams (IMT), Launch Package Teams (LPT), and ISSP Management Center (IMC).
- h) Guide the SDTO/DTO initiator through the processes and products associated with flight or stage assignment and approval, execution planning preparations and approval, real time operations, and post execution closeout, in accordance with the SDTOC (SSP 50448). The contractor shall facilitate the development of interfaces between the SDTO/DTO initiator and

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implementing organizations.

- i) Develop, manage, and update the website contents of the SDTO documentation and related information as defined in 4.1(f).
- j) Coordinate, facilitate, and validate the reporting of SDTO/DTO results by the SDTO/DTO owner to the MIOCB (unilateral, bilateral or multilateral as required); collect the results reports and archive them for ISSP access as defined in the SDTOC (SSP 50448).

4.1.1.1.4 Increment Resources Tracking and Reporting (CF)

The availability of specific on-orbit ISS resources are shared by the ISSP community with quantitative rights for International Partner usage allocated in the IDRDs at the ISSP level, and by the MIOCB, delegated to the RIP, at the internal NASA level. The IDRD BB (SSP 54002) Section 4 identifies the ISSP managed resources. The purpose of this function is to track and validate the actual use of these resources against the planned allocations during each increment and develop records of the results.

- a) The contractor shall collect, collate, document and validate with the appropriate ISS teams and the on console increment team in the IMC, the as planned and actual on-orbit ISS resource usages of all of the tasks performed during each increment.
 - 1) The contractor shall develop processes and products that will be used consistently across all of the increments.
 - 2) The contractor shall perform increment to increment data comparisons to identify across increment trends and correlations.
 - 3) The contractor shall apply primary emphasis on crewtime. Authorized crewtime data sources include operations On-Orbit Operations Summary (OOS), Long Range Plan (LRP), Short Term Plan (STP), Execution Plan, and ActStat products; console records (logs, reports); increment specific IDRD Annex 2, 3, 4, and 5 book managers or coordinators, Payloads Operations and Integration Center (POIC) reports, International Partner correspondence, and realtime console operator correspondence.
 - 4) The contractor shall implement the tracking of additional resources as the need is determined by the MIOCB.
- b) The contractor shall develop weekly reports for presentation of the resource usage results to the MIOCB, IMMT or ISS Manager Program Review and management status reporting through the MIS, Section 1.1.1.4 of the SOW.

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- c) The contractor shall deliver the increment complete resource usage data for post-increment product development and data archival (see Section 4.1.1.1.5 below).
- d) The contractor shall validate and document the actual on-orbit subsystem resource demands (primarily stowage) to the allocations established by the RIP.

4.1.1.1.5 Increment Engineer (IE) Tasks (LOE)

The contractor shall support the Increment Manager as required to provide programmatic oversight, insight, and management of all ISS increment related activities, including Research and Development activities pre, during, and post increment. Contractor IE services shall start approximately 26 months prior to an increment start. After the increment the contractor IE may be assigned other duties part time until the Post Increment Evaluation Report (PIER, SSP 543xx) is approved.

- a) The contractor shall perform the Increment Engineer functions in accordance with the processes and responsibilities defined in SPIP Volume 1 (SSP 50200-01) Section 3.12, 3.13, 4.2, 4.3 and SPIP Volume 2 (SSP 50200-02) Sections 3.0, 5.0, 5.1 and 5.3. This includes the preflight preparations, realtime operations, and postflight closeout of the increment.
- b) As a member of the NASA-contractor Increment Management Team (IMT), the contractor shall assist the IM to manage, conduct, perform, and evaluate all of the preflight, realtime operations, and postflight tasks required to successfully define, plan, implement, and complete the increment in accordance with the increment specific schedules.
- c) The contractor shall develop and maintain IMT schedules in accordance with Integrated Mission Integration Office Schedules (DRD B-PC-06).
- d) The contractor shall perform on-console operations in the IMC in accordance with the ISS Management Center Operations Handbook (IMCOH) and Program Management Operations and Integration Procedures (PMOIP) and MCC standard operating procedures. Console operations shall be performed during crew awake time periods 5 days per week for stage operations and during all shifts throughout the docked time period for joint Shuttle-ISS operations.
- e) The contractor shall record, validate, and report the status of all tasks performed during the increment for weekly report development during realtime operations and for post increment reports, presentations, and Lessons Learned evaluations. Sources for approved tasks include the IDRD PP (SSP 541xx) and IDRD Annexes 1, 2, 3, 4, and 5 (SSP 541xx-ANXyyy, SSP 541xx-ANX2, SSP 541xx-ANX3, SSP 541xx-ANX4, and SSP 541xx-ANX5, respectively), chits, Planning Product Change Requests and on-console IMC products.
- f) The contractor shall develop recommended lessons learned for each increment, update database, and track associated action closures. The contractor shall also collate proposed lessons

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learned collected from the IMT members and, upon approval by the IMT, forward them to the appropriate program boards and panels for their action item review and approval in accordance with the processes defined in the Post Mission Guidelines (SSP 50168).

- g) The contractor shall develop and Book Coordinate the increment specific PIER, in accordance with CM processes in Section 1.3 of this SOW.
- h) The contractor shall recommend, coordinate, and submit upon approval by the NASA Requirements and Increment Integration Manager, SPIP Volume 2 (SSP 50200-02) and MIT (SSP 50489) process improvements to the respective Book Coordinators for CM processing according to their schedules (nominally once per year).
- i) The contractor shall respond to changes in increment planning and tasking as increment planning, increment requirements, off-nominal events, and corrective plans impact the work plan. The contractor shall develop changes to the implementation plans and schedules upon request by NASA.
- j) Upon request by the IM or the RIP Chairperson, the contractor shall perform special studies and recommend methodologies for new tasks as issues are identified.
- k) The contractor shall develop weekly reports for presentation of the Increment status and Increment metrics to program boards and panels and management status reporting through the MIS, Section 1.1.1.4 of the SOW.

4.1.1.1.6 Console Operations Support Documentation (CF)

The contractor shall perform the following tasks in support of the coordination, integration, and maintenance of console operations program documentation.

- a) For PMOIP the contractor shall:
 - 1) Book Coordinate the PMOIP in accordance with the definition in Section 4.1(d).
 - 2) Update the PMOIP once per year per NASA approved schedule.
 - 3) Organize and conduct, upon request by the IM or the RIP Chairperson, IP telecons and TIMs to integrate data inputs, identify discrepancies and obtain agreement for content of this document. This includes the development and distribution of agendas, minutes, discussion and presentation material, action status tracking. This is a RIP controlled document.
 - 4) Upon request by the NASA RIP Chairperson, organize the development and documentation of studies leading to the resolution of issues associated with the PMOIP. This includes the development and coordination of meetings, agendas, presentation

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material and action item tracking.

- 5) Develop and curate the website content of the PMOIP documentation and its related information as defined in 4.1(f).
- b) For IMCOH the contractor shall:
- 1) Book Coordinate the IMCOH in accordance with the definition in 4.1 (a).
 - 2) Process updates to the document once following each flight and stage according to NASA approved schedule.
 - 3) Organize and conduct, upon request by the IM or the RIP Chairperson, IP telecons and TIMs to integrate data inputs, identify discrepancies and obtain agreement for content of this document. This includes the development and distribution of agendas, minutes, discussion and presentation material, action status tracking, CM paper flows and protocols.
 - 4) Organize and conduct, upon request by the NASA RIP Chairperson, the development and documentation of studies leading to the resolution of issues associated with the IMCOH. This includes the development and coordination of meetings, agendas, presentation material and action item tracking.
 - 5) Develop, manage and update the website content of the IMCOH documentation and its related information as defined in 4.1(f).

4.1.1.1.7 IMC Administration (CF)

The contractor shall provide administrative support to the IMC for on-orbit console operations in accordance with in the IMCOH. Tasks shall be performed during all shifts of the Shuttle-Station docked operations and once per week during stage operations or as requested by the NASA IM.

The contractor shall:

- a) Develop, manage, and update the website content of the IMC and its related information.
- b) Develop and confirm the official list of personnel to work in the IMC during real-time operations for flights and stages. This task shall be performed prior to each flight and stage and approved by the NASA IM.
- c) Coordinate, facilitate, and confirm building badging and facility access to the computer systems for personnel who will work in or visit the IMC. This task shall be performed prior to the start date of the access requirement and approved by the NASA IM.

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- d) Maintain IMC real-time/near-real time library of material distributed during flight and stage operations, as defined in the IMCOH.
 - e) Update or confirm the status of all of the increment and launch package operations documentation, including FDF, Station Operations Data Files (SODF), and ground based operations documents prior to each flight and stage and as new documents or as changes are released.
 - f) Develop and deliver to the NASA IM archival files and an archival library of Increment and Launch Package electronic files and hardcopy records from completed flights and stages. The material to be archived for each flight and increment will be identified and approved by the NASA IM.
 - g) Sustain supplies, equipment and documentation in the IMC to support Increment teams, Launch Package teams, and ISS visitors during on-console operations, including the distribution and tracking of the voice system headsets as requested and approved by the NASA IM.

4.1.1.1.8 Administration and Schedules Support (CF)

The contractor shall provide administrative and schedule support for the RIP, IMT, and Requirements and Increment Integration Office. The contractor shall:

- a) Update IMT schedules (reference DRD B-PC-06) and report to NASA weekly.
- b) Provide administrative support to the Requirements and Increment Integration Office meetings, the RIP, and the IMT as defined in 4.1(e).
- c) Develop and update the Requirements and Increment Integration Office, RIP, and IMT websites as defined in 4.1 (f).

4.1.1.1.9 Station Tactical Increment Consumables and Resource Management (LOE)

In order to insure critical consumable resources are available to the ISS when they are needed, an integration of the work across technical teams for planning, tracking and evaluation of usage is required across key consumable categories. The RIP is accountable for negotiating the usage rates of these consumables with the partners and presenting any changes to the MIOCB.

- a) The contractor shall collect, document, and validate with the appropriate ISS teams, including the on-console flight control team and Mission Evaluation Room (MER) personnel, the actual resource usages for each of the categories of consumables.

- 1) The contractor shall develop processes and products that will be used consistently across all of the increments.

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- 2) The contractor shall perform consumable distribution planning across increments and flights and provide recommendations for IDRP and IDRD resupply and return system allocations.
 - 3) The contractor shall integrate and coordinate the tracking of additional consumables as the need is determined by the RIP.
 - b) The contractor shall integrate and coordinate weekly reports for presentation of the consumable status to the IMMT and other boards, as applicable.
 - c) The contractor shall curate the Consumables Tracking website, as directed by the RIP or the Consumables Team lead, including weekly updates of the consumables tracking graphs.

4.1.1.2 Launch Package Integration

The Launch Package (LP) function ensures that ISS operations, maintenance/sustaining engineering, and R&D requirements are implemented pre-mission and during joint operations. The function provides program leadership in defining, developing and implementing mission requirements. The overall day-to-day management and oversight for the ISSP launch package activities shall be the sole responsibility of the NASA assigned Launch Package Manager (LPM). This function integrates requirements into a set of launch package requirements and provides management oversight for the organizations responsible for implementing those requirements, to ensure that mission planning is in accordance with the requirements. This function also provides mission support to track the execution of the requirements and provides programmatic coordination and direction in the event of any off-nominal situations during real-time joint operations.

4.1.1.2.1 Launch Package Engineer (LPE) Tasks (LOE)

The contractor shall support the NASA LPM with 2 LPE's per flight to assist in the execution of these activities. In addition 5 total LPE's and 2 GFE specialists will be resident at Launch Site Integration Office at KSC (LSIO/KSC). LPE's begin supporting a flight at approximately L-24 months, the contractor LPE shall:

- a) Provide recommendations for updates to processes, policies, procedures, and operational schedules in SPIP Volume I (SSP 50200-02) and LP work instructions. The contractor shall also maintain the LP work instructions.
- b) Assist the LPM in establishing the Launch Package Team (LPT) to include identifying team members, LPE skill level and roles and responsibilities.
- c) Develop, coordinate, and distribute agendas and schedules for weekly LPM team meetings, Payload Planning Working Group Meetings (PPWGs), IP face-to-face LPM TIMS and

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other forums required to integrate and coordinate LPM requirements.

- d) Conduct weekly LPM team meetings as required by the LPM.
- e) Coordinate with LPT member representatives to support the development of launch package flight specific integration schedules (level I/II/III) to include an integrated top level schedule with specific level I, II, III milestones (DRD B-PC-06 and B-PC-07). Schedules shall be base lined at L-16 months and updated weekly to support Program Level meetings/Boards. (At approximately L-6 months, daily updates will be required)
- f) Monitor the delivery dates for mission integration products and data in accordance with MIT (SSP 50489) and launch vehicle program schedules (for example Flight Production Working Schedules for Shuttle.) Identify impacts to schedule changes and assist in the resolution of conflicts.
- g) Assist cargo item providers in implementing certification requirements defined in ISSP CoFR Process Document (SSP 50108).
- h) Coordinate the development of agenda items, special topics, and presentation briefings for formal ISS Program Reviews. Examples include the Stage Integration Review (SIR), Launch Package Assessment Review, the Stage Operations Readiness Review (SORR) and the Flight Readiness Review (FRR).
- i) Track and / or resolve launch package actions resulting from LPT meetings, ISSP boards, and other ISSP forums. The contractor shall document resolutions and decisions from assigned action.
- j) Participate in ISSP/Space Shuttle Program, operations, and engineering reviews and meetings as required by the LPM or NASA office lead in order to coordinate and integrate launch package operations, sustaining engineering/maintenance, R&D related requirements, and technical issues. The contractor shall identify issues and provide recommendations for closure and present at the appropriate board panel.
- k) Assist MOD in flight rule development, procedure development, and transfer cue card requirements coordination, and evaluation, including impacts to R&D activities.
- l) Ensure that on-orbit checkout requirements are completed and documented in the IDRDR.
- m) Ensure that mission cargo close out configuration checklist are completed and documented in the Operations and Maintenance Requirements and Specifications Document (OMRSD) (NSTS 08171).

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n) Assist the LPM in the review/development of Assembly and Operations Support Plan (OP-01) and the Assembly Operations Plan.

o) Develop implementation plans, at NASA's request, to respond to off-nominal events, changes in assembly sequence, hardware slips, etc.

4.1.1.2.2 LPE Joint Operation Requirements Development Tasks (LOE)

The contractor shall support the definition, development, and prioritization of integrated launch package intra-vehicular (IVA) and extravehicular (EVA) tasks and requirements for the joint mission. These requirements shall be documented and baselined in the appropriate ISSP documentation. The contractor shall:

- a) Collect IVA and EVA mission tasks and requirements for inclusion in IDRD PP Section 6 "Flight Specific Requirements". Recommend prioritization of requirements and tasks.
- b) Support the evaluation of Manifest Requests (MR's) (reference Section 4.1.1.3).
- c) Evaluate manifest to validate it supports ISS and R&D requirements defined in IDRD PP.
- d) Support the prioritization of flight manifest, including R&D hardware.
- e) Develop and/or coordinate the development of launch package operational, analytical, and physical integration requirements to support JOP, joint WGs, and other ISSP forums.
- f) Develop, coordinate, and integrate the mission cargo hardware Off Nominal Scenarios (ONS) for the joint mission.
- g) Develop and/or coordinate ISS operations, maintenance/sustaining engineering, and R&D imagery requirements for the flight (reference Section 4.1.1.6).
- h) Monitor closure of cargo items flight safety review nonconformance requirements (NCR's) prior to flight.

4.1.1.2.3 LPE Launch Vehicle Integration Requirements Development Tasks (LOE)

The contractor shall support the definition, development, and prioritization of integrated launch package requirements for the assigned vehicle. The vehicles shall include Shuttle and IP transport vehicles. The launch package tasks will vary depending on the vehicle.

- a) Shuttle Launch Vehicle Integration

The contractor shall:

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- 1) Collect and integrate Cargo Element data (i.e. MPLM, unpressurized carriers, Spacehab, or IP element) from sanctioned sources to incorporate into the required Shuttle documentation such as the MIP and Annexes, Interface Control Documentation (ICD), and launch schedules/milestones. Data that requires coordinate system definition (i.e. mass properties, 3 Dimensional Computer Aided Design (CAD) models, etc.) shall be transmitted in accordance with Space Station Reference Coordinate System (SSP 30219). Applicable Shuttle data is defined in Shuttle/Launch Package Standard Integration Plan for International Space Station Missions, (NSTS 21000-SIP-MIP (ISS)).
 - 2) Develop the following integrated launch package deliverables:
 - MIP Annex 1
 - MIP Annex 2 Part 1 & 2
 - MIP Annex 4
 - Interface Control Agreement (ICA)
 - MIP Annex 8
 - 3) Support the joint WGs between the ISSP and the launch vehicle to ensure that the integrated launch package operational, thermal, structural, and safety requirements are met.
 - 4) Monitor the delivery of ISSP operations, sustaining engineering/maintenance, and R&D hardware and software items to identify risks and impacts to meeting launch vehicle integration schedules and milestones.
 - 5) Resolve assigned action items resulting from ISSP and launch vehicle major reviews and forums.
- b) IP Transport Vehicle Integration (Progress, Soyuz, ATV, HTV)

The contractor shall support the LPM in the overall definition, development, and implementation of mission requirements. This includes the following tasks:

- 1) Collect, perform feasibility assessment and integrate cargo data (i.e. technical data sheets, manifest requests, shipping requirements, etc) from the appropriate ISS and IP organizations. This data will be coordinated with the appropriate transport vehicle IP Manager by the NASA LPM.
- 2) Develop and maintain schedules for the visiting vehicles (DRD B-PC-06). Milestones should include delivery of ISSP and IP operations products, vehicle production schedules, testing milestones, sustaining engineering (utilizing Element Manager support), and software items to identify risks and impacts to vehicle readiness to support planned launch date.

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- 3) Ensure that all flight requirements/milestones are being met and that all required engineering data (i.e. mass properties, models, etc.) is transmitted to the appropriate ISS organization per the MIT (SSP 50489) and flight unique schedules.
 - 4) Support joint WGs and forums between the ISSP and IP to ensure that all launch package operational, technical, and safety requirements are met. The contractor shall chair these meetings at the request of the LPM.
 - 5) Resolve assigned action items resulting from ISSP and vehicle major reviews and forums.
 - 6) Provide real time support in the IMC of major events such as docking/undockings.

4.1.1.2.4 Launch Site Integration / De-integration Activities (LOE)

To support on-site launch package ground processing requirements at the launch and landing site, for the LPM and resident in LSIO/KSC the contractor shall:

- a) Coordinate and/or develop ground processing documentation (chits) to facilitate anomalies resolutions or workarounds for flight hardware (middeck and Multi Purpose Logistics Module (MPLM) hardware) integration and certification resulting from pre-flight assembly, test, checkout, and integration/ de-integration activities at the launch and landing site.
- b) Support LPT during mission operations and perform real-time return manifest chits to support Return Manifest Disposition Plan (RMDP) and LPM tasks.
- c) Monitor the delivery of ground safety data products for LP cargo items. Coordinate the resolution and closure of NCRs prior to flight.
- d) Support IP hardware processing for flight (middeck and MPLM) and post-flight de-integration tasks.
- e) Provide on a contingency basis, MPLM pre-bench review hardware verification and label application to flight hardware in support of the Cargo Mission Contract as directed by the LPM.
- f) Support pre and post flight hardware processing as required at Spacehab, Port Canaveral.
- g) Represent LSIO at the daily Materials Engineering Review Board (MERB), submit the LPM mission inputs to the integrated Operations and Maintenance Requirements and Specification Document (OMRSD), NSTS 08171, act as LPE representative during launch and landing countdown at KSC, and support landing/post-landing operations.
- h) Participate in KSC IP hardware cargo planning, processing, integration, and deintegration reviews (i.e. Payload Readiness Review (PRR), Launch Readiness Review (LRR) and Ground

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Operations Review (GOR) etc.).

i) The contractor shall perform the following tasks for GFE ISS hardware delivered to KSC:

- 1) Review shipping and receiving documentation (DD250/1149/JSC Form 290) and Acceptance Data Packages for compliance with KSC receiving requirements in ISS and Payload Receiving and Shipping Guidelines (K-SS-12-17). Report discrepancies to hardware providers and track closure status.
- 2) Report discrepancies (Problem Reports and crew concerns) noted during crew hardware reviews and fit checks to hardware providers and track closure status.
- 3) Prepare KSC Work Authorizing Documents for hardware repairs resulting from discrepancy reports that can be performed at KSC.
- 4) Perform electronic photo documentation for discrepancies noted during hardware receiving, hardware reviews and fit checks and repairs. Maintain readiness state (batteries and memory cards) of NASA digital camera inventory at KSC LSIO.

4.1.1.2.5 LPE Real-time and Post-Mission Support Tasks (LOE)

The contractor shall perform the following activities in the IMC. The real-time team shall consist of the NASA LPM or LP Integration Manager and contractor LPE's. The contractor shall provide the personnel to support one-shift operations beginning at L-2 days before launch. At launch, the contractor shall provide personnel to support continuous operations until the first shift after shuttle undocking. The contractor shall:

- a) Develop the launch package team training and certification requirements for the flight for LPM team members who will be supporting real-time operations. (Reference IMCOH.) These requirements shall be documented in training plans and certification plans.
- b) Conduct training sessions and participate in simulations.
- c) Provide program requirements tracking, oversight, and resolution of real-time operational, maintenance/sustaining engineering and R&D issues that fall outside pre-mission requirements, ground rules, and constraints for the joint mission (reference IMCOH).
 - Develop the prelaunch transfer chit as input to final transfer plan development
 - Evaluate and concur on chit 0
 - Develop daily transfer chits for middeck, MPLM, pressurized modules, or IP hardware as required
 - Develop daily Logs
 - Develop LPM Shift Reports
 - Develop inputs to the Post Flight Report

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- d) Monitor real-time timelines to ensure that IDRD PP requirements are accomplished during joint operations. Document any deviations for post mission briefings.
 - e) Conduct post-mission debriefs.
 - f) Develop, coordinate and provide recommended lessons learned for each flight, update database, and track associated action closures in accordance with the Post Mission Guidelines (SSP 50168).

4.1.1.2.6 Flight Station Tactical Resource Management (LOE)

The contractor shall provide technical analysis, integration and planning support to the RIP and other multiple flight/increment forums to perform the following functions:

- a) Transition resupply and return allocations from the strategic to the tactical timeframe for use by tactical planners, increment and launch package teams.
- b) Conduct quantitative analyses (using the Station Tactical Operations Resource Management tool or equivalent contractor provided tool) of projected requirements to make recommendations regarding maximization of resources focusing on mass and volume for ascent/descent cargo.
 - 1) Collect projected cargo requirements for all flights to the ISS from cargo category owners and review data for consistency across flights and with previous projections.
 - 2) Define capabilities for each flight working with the LPT to insure consistency in reported capabilities.
 - 3) Update data on a continuous basis to include pressurized (and unpressurized) cargo and capabilities across the tactical timeframe for all flights to the ISS.
 - 4) Provide reports to NASA on a monthly basis or as required to support what-if scenarios and replans.
 - 5) Sustain the STORM tool or equivalent tool.

4.1.1.2.7 Certificate of Flight Readiness (CoFR) Process Support (LOE)

The contractor shall facilitate the Mission Integration and Operations (MIO) CoFR process for each flight to provide for consistent data collection, presentation, and archival of the internal NASA/Contractor CoFR data, in accordance with MIO work instructions. This may include collection of specified data from the Cargo Mission Contractor.

4.1.1.2.8 Launch Package Support Functions (CF)

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- a) Develop, update, and report launch package schedules as described in 1.2.5.2.
- b) Provide administrative support to the LPT's as defined in 4.1 (e).
- c) Update program launch package websites as defined in 4.1 (f).
- d) Provide and update all flight specific documentation for the LPT. Examples include inputs to the Mission Integration Plan (MIP), IDRD, Flight Rules, Joint Operations Panel (JOP) presentations/minutes, etc.

4.1.1.3 Manifest

The program flight manifest function provides for detailed flight manifests for each flight to the ISS, analyses across manifests, and the database tools and administration to support this function. The following tasks shall be performed in accordance with the processes defined in SPIP Volume 2 (SSP 50200-02) Section 5.2, Appendix N (NASA/RSA Bilateral Process) and Appendix H (Program Planning and Manifesting Tools, Databases, and Interfaces).

4.1.1.3.1 Manifest Process Support (CF)

The contractor shall interface with program representatives, partners, and NASA institutional organizations to maintain ISS manifest processes to:

- a) Develop process improvements recommendations with the ISS and R&D community and provide coordinated updates to the SPIP Volume 2 (SSP 50200-02), MIT (SSP 50489), and the MIDS BB, (SSP 50622-02) to the Manifest WG (MWG) Chairperson. Upon approval of the MWG Chairperson, deliver to Book Coordinators according to their schedules (nominally once per year).
- b) Review GGR&C manifest content annually and provide recommendations for manifest related updates to the GGR&C to the GGR&C Book Coordinator after concurrence by the MWG Chairperson. Upon approval of the changes, incorporate approved changes into manifest processes, MIDAS standard listings, and manifest products.
- c) Update and report manifest schedules weekly to the MWG Chairperson (see Integrated Mission Integration Office Schedules DRD B-PC-06).
- d) Curate the manifest website to provide the ISS community access to manifest products, processes, data and reports as defined in 4.1 (f).
- e) Organize, facilitate, and conduct upon request manifest teleconferences and TIMs with partners as required to produce manifest products including agenda and protocol development. Telecons are nominally held weekly with Russia with face-to-face meetings three times per year.

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Telecons with other partners are held biweekly within 14 months of flights on their vehicles. For the HTV, support NASA in development of manifest processes including TIM support (nominally twice per year prior to HTV template timeframe).

f) Provide administrative support to the manifest team/MWG as defined in 4.1 e). In addition, provide support to document MR dispositions and statuses in Mission Integration Database Application System (MIDAS), keep files of signed MR originals and provide reports of MR statuses and actions to the MWG Chairperson upon request.

4.1.1.3.2 Flight Specific Manifests (CF)

The contractor shall interface with program representatives such as hardware providers, manifest representatives, launch package and increment management teams to develop manifests (up and down) for all vehicles and flights (Shuttle, Soyuz, Progress, ATV and HTV). This function includes the following tasks:

- a) Develop initial manifest in MIDAS using MIDAS provided generic manifest listing for items that are carried on all flights. Manifest shall be tailored to IDRD PP defined flight specific requirements.
- b) Process changes to the manifest
 - 1) Collect recommended MR dispositions from the affected LPM, IM and other mandatory reviewers and request closures at the MWG (approximately 100 per month).
 - 2) Report status of open MR's to the MWG upon request of the MWG Chairperson including signature status, open issues and expected closure dates.
 - 3) Incorporate approved MR changes into the MIDAS dataset including update of associated data including priorities, special handling, hazards, or any other identified special requirement (reference MIDS BB (SSP 50622-02)).
 - 4) Approved MR's shall be incorporated weekly to the working manifest in MIDAS for community review using MIDAS web access.
- c) Book Coordinate the program flight manifest (IDRD Annex 1) document per the schedule in the MIT (SSP 50489) and the task defined in 4.1 (d).
- d) Review changes to the IDRD PP and identify discrepancies with the working manifest (and MRs) to the IMT and MWG Chairperson with recommended corrections.

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- e) Validate consistency between IDRD Annex 1 and other IDRD products. Initiate discussions with product owners to resolve identified issues and discrepancies.
 - f) Coordinate transfer of MIDAS dataset contents to IP's as required by the MIT (SSP 50489) and IP request.
 - g) Provide inputs to the CoFR process for each flight per MIO work instructions.
 - h) Provide flight support to the IMC as defined in the IMCOH. Response shall be within 30 minutes during normal duty hours and within 2 hours during off-duty times. Tasks shall include attendance at daily tag-ups to collect real-time changes, input of changes to MIDAS and production of the post-flight MR for approval.
 - i) Develop, coordinate and provide recommended lessons learned for each flight according to the processes defined in the Post Mission Guidelines (SSP 50168). Upon approval of the MWG Chairperson, forward to the LPT.
 - j) For shuttle flights, provide the middeck manifest report (ICA manifest report produced by MIDAS) to the LPM team for delivery to Shuttle (reference LPM Section 4.1.1.2.3) according to the MIT (SSP 50489) or upon request by the LPT.
 - k) From six weeks prior to flight through launch, provide weekly reports to the MIOCB regarding changes, certification status, and manifest issues.

4.1.1.3.3 Tactical/Increment Manifest (LOE)

The contractor shall participate in the MWG, IMT, RIP and other forums to perform integration across flights for the two to three year horizon consistent with the IDRD FP including the following tasks:

- a) Provide a tactical manifest plan to define manifest approach for critical consumables and other major cargo in support of ISS operations, sustaining engineering/maintenance, and R&D.
- b) Perform analyses to support potential changes and what-if scenarios to support ISS management cargo related decisions.
- c) Provide recommendations for updates to flight manifests due to unexpected changes for example on-orbit anomalies and visiting vehicles schedule changes.
- d) Develop/collect U.S. requirement projections for partner vehicles to support official NASA requests.
- e) Support CoFR as defined in MIO work instructions.

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- f) Integrate flight data for input to the PIER (Reference IMT Section 4.1.1.1.5).
- g) Develop, coordinate and provide recommended lessons learned for each increment to the MWG according to the processes defined in the Post Mission Guidelines (SSP 50168). Upon approval of MWG Chairperson, deliver to IMT.
- h) Support IMC as required to provide manifest information for U.S. and IP operations and respond to manifest related crew questions.
- i) Integrate flight data for multi-increment reports.

4.1.1.3.4 Database Capability (CF)

The contractor shall provide sustaining support for the MIDAS, which is used for integration of manifests and other mission integration data as defined in ISAC-324-REQ-84. Functions include support to the Cargo Mission Contract, NASA and the MIC contract. Tasks include:

- a) Upgrades as required to correct requirement non-compliance, accommodate process changes, upgrade application platform and provide more efficient operations including automation of planning functions as appropriate. Changes to the database requirements shall be coordinated with the user community. Reference MIDAS Upgrades and Targeted Upgrades for information regarding expected maturity of MIDAS at contract start.
- b) Tracking and reporting of discrepancies, issues, and new software requirements associated with the MIDAS database to NASA and system users per Discrepancy and New Requirements Tracking for MIDAS (DRD B-MI-04).
- c) Maintenance of external interfaces documentation including Book Coordination of ICD's with partners and other databases as defined in 4.1.(d).

Interfaces are defined in:

- Mission Integration Database Application System (MIDAS) to Cargo Integration Data Management Tool (CIDMT) Interface Control Document, (SSP 50647)
 - MIDAS to Vehicle Master Data Base (VMDB) ICD SSP (50174)
 - MIDAS to Stowage Integration System (ISAC-324-REQ-84)
 - MIDAS to Cargo Flow, Maintenance, and Inventory Database (SSP 50173 (Russian manifest interface)).
- d) Coordination of export control issues related to MIDAS.
- e) Maintenance of existing users guides or provide equivalents (reference MIDAS User Training Guides (ISAC-324-UG-83)) for major functional areas of the tool and develop users

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guides for new functionality per the Users Guides for MIDAS (DRD B-MI-01). Develop, maintain, and conduct training courses for new MIDAS users for each primary functional area.

- f) Develop or update the MIDAS System Requirements Document (ISAC-324-REQ-84 or equivalent) per the Systems Requirements Document for the MIDAS (DRD B-MI-02).
- g) Develop or update the MIDAS System Design Document (ISAC-328-DSN-84 or equivalent) per Design Document for the MIDAS (DRD B-MI-03).
- h) Provide coordinated updates to SPIP Volume 2 Appendix H, Program Planning and Manifesting Tools, Databases, and Interfaces to Book Coordinator (nominally once per year).

4.1.1.3.5 MIDAS System Administration (CF)

The contractor shall perform system administration functions for the MIDAS.

- a) Update system tables and pick lists (nominally 2 changes per month).
- b) Upon NASA MIDAS OPR approval, add new accounts to the system and change access privileges to the system. Validate that new users have required training by maintaining MIDAS training records.
- c) Perform data file exchanges with other program databases upon request of manifest leads or NASA OPR including IP databases and IMS according to agreed procedures defined in ICD's.
- d) Transfer manifest updates to the VMDB at IDRD Annex 1 CR initiation and approval.
- e) Maintain a history log of data exchanges with all other data systems including date of transfer, content including CR number, and external system name. This log shall be accessible to NASA electronically.
- f) Archive all active flight manifests weekly including working manifest files and approved manifest files.

4.1.1.3.6 Parts Data Maintenance (CF)

The contractor shall maintain the electronic catalog of generic part information within the MIDAS tool. This includes:

- a) Review of submitted MR information to identify changes to the parts catalog and validation of changes with the appropriate authoritative source (hardware owner organization) to ensure the mass property information is correct. Part information shall be updated based on validated date provided by authoritative sources within 2 working days of receipt of correct

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information.

- b) Addition of new parts to the catalog when new parts are identified on a MR and place holders in the catalog when requested to initiate assignment of operations nomenclature.
- c) Update existing part information based on validated date provided by authoritative sources within 2 working days of receipt of correct information.
- d) Provide notification to manifest developers and to appropriate VMDB (or equivalent) OPR of updates to part information per the Reporting of Changes to MIDAS Part Catalog Information (DRD B-MI-05). Records of transmitted notifications shall be retained for historical purposes. Retained historical information shall be retrievable electronically by part number or by name of affected flight.

4.1.1.4 Inventory Management System (LOE)

4.1.1.4.1 Inventory Management System Processes

The contractor shall:

- a) Coordinate IMS requirements and resolution of issues across the program including IMS software, hardware (barcode reader) and data collection in accordance with SSP 50007, Inventory Management System Requirements. Primary contacts include MOD IMS personnel, cargo mission contract personnel, crew and IP's. Coordination will be in the form of crew debriefings, review of IMS related schedules, correspondence, and meetings. Report problem areas to NASA along with recommended approaches to resolution.
- b) Coordinate, facilitate, and conduct upon NASA request IMS meetings, teleconferences and TIMs (including Bilateral Inventory Management System WG (BIMSWG) meetings). IMS meetings are nominally held twice per month at JSC, teleconferences once per month, and TIMs three times per year (twice per year in Moscow). Products are provided to the NASA Co-Chairperson of the BIMSWG.
- c) Make recommendations for improvements and evaluate proposed changes to IMS processes, hardware and software across the ISS program, including IP's. Provide reports to NASA Co-Chairperson of the BIMSWG.

4.1.1.5 Crew Provisioning/Mission Habitability

4.1.1.5.1 Crew Provisioning Management (CF)

The contractor shall interface with program representatives such as IP's, crew, hardware providers, manifest representatives, launch package and increment management teams to perform Crew Provisioning Management. All changes to crew provisioning policies,

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international agreements, and directing of NASA and non-MIC personnel shall be done through the NASA crew provisioning POC. Crew provisioning planning activities shall be performed as defined in the Crew Provisioning Management Plan (CPMP) (SSP 50409) and SPIP Volume 2 (SSP 50200-02, Section 5.5). The contractor shall limit dissemination of information regarding individual crew clothing, personal hygiene, and crew preference items to persons with a direct requirement for the data to perform their work and approval authorities as defined in the GGR&C (SSP 50261-01). The contractor shall:

a) Manage crew provisions:

- 1) Conducting Crew Provisioning WG (CPWG) meetings (nominally semi-monthly) to obtain ISS community agreement on increment specific crew supply requirements, delivery plan, and schedules, address changes to the plans, coordinate response to feedback from crews, and share other planning related information. These include telecons and TIM's to integrate partner crewmember supplies including agenda development and protocols. TIMs are nominally twice per year.
- 2) Recommending and coordinating updates to the Charter for the Crew Provisions WG (CPWG) (ISSP-PPD-517).
- 3) Book Coordinating the CPMP (SSP 50409) per the tasks defined in 4.1.(d).
- 4) Coordinating process inputs and providing updates to SPIP Volume 2 (SSP 50200-02, Section 5.5) and the MIT (SSP 50489) to the NASA crew provisions point of contact. Upon NASA concurrence, provide to the Book Coordinators according to their schedules (nominally once per year).
- 5) Update and report crew provisions team schedules to NASA monthly (see Integrated Mission Integration Office Schedules (DRD B-PC-06)).

b) Develop and maintain the detailed manifest requirements for crew provisions:

- 1) Coordinate crew provision requirements with Russian representative and the crew office for all crew provision items including personal hygiene items, clothing, towels, wipes and office supplies for each ISS crew.
- 2) Generate and coordinate MR's for crew provision items launch and return.
- 3) Provide detailed crew provision requirements through NASA Crew Provisioning OPR to supplying contracts. Coordinate fit checks, packing and delivery requirements (including customs paperwork).

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- 4) Provide re-plan projections to support what-if analyses for changes to the flight and/or increment operations, maintenance/sustaining engineering and R&D plans.
 - c) Manage resupply of crew consumables:
 - 1) Track actual usage of consumables by the on-orbit crew through review of IMS and request of crew audits to validate proper resupply.
 - 2) Evaluate crew on-orbit usage of crew provisions to identify trends and identify deviations between projected usage and actual usage of crew supplies.
 - 3) After coordination with the CPWG, develop presentations and provide requests to change usage rates and allocations to the RIP. Provide usage rate updates to the GGR&C (SSP 50261).
 - 4) Provide each ISS crew with training information on planned usage rates including listings for crew notebooks and cue cards for on-orbit.
 - d) Coordinate requirements for new crew provisioning items procurement and modifications to current crew provisions with the NASA Office of Primary Responsibility (OPR) or designee.
 - e) Book Coordinate the Joint Crew Provisioning Catalog (SSP 50477) per the tasks defined in 4.1(d).
 - f) Curate the crew provisions website as defined in 4.1 (f).
 - g) Perform the following mission and post-mission activities:
 - 1) Solicit on-orbit crew resupply requirements prior to each flight (reference ISS Resupply Request form, Appendix H, Form 4).
 - 2) Respond to crew requests for additional supplies by assessing availability/feasibility, and coordinating response with NASA IM, MWG and other affected organizations.
 - 3) Conduct post increment crew debriefing for provisions according to the technical debrief process defined in Post Mission Guidelines (SSP 50168).
 - 4) Inventory returned crew provisions and retain records of actual usage for use in task 4.1.1.5.1 (c).
 - 5) Develop, coordinate and provide recommended lessons learned for each increment to NASA crew provisioning POC according to the processes defined in Post Mission

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Guidelines (SSP 50168). Upon NASA crew provisioning POC concurrence, provide to IMT.

- 6) Update launch and return requirements to correct for actual usage.

4.1.1.5.2 Waste Management (LOE)

The Waste Management (WM) function coordinates waste removal supplies and disposal options within NASA and the IP's. This task requires that the contractor interact with and coordinate with program representatives and WGs such as hardware providers, crew, manifest representatives, launch package and increment management teams.

The contractor shall develop processes and products that will be used consistently across all of the increments.

In accordance with the processes defined in SPIP Volume 2, Section 5.4 (SSP50200-02) and the Management Plan for Waste Collection and Disposal (SSP50481), the contractor shall:

- a) Provide the following documentation and meeting support:
1. Perform the Book Coordinator function for Management Plan for Waste Collection and Disposal (SSP50481) as defined in 4.1(d). (nominally once per year)
 2. Develop, integrate and provide coordinated WM inputs to Book Coordinators according to their schedules for SPIP Volume 2 (SSP 50200-02), GGR&C (SSP 50261) and MIDS Blank Book (SSP 50622-02).
 3. Coordinate, facilitate and conduct upon request telecons and TIM's with Partners, to insure partner compliance with SSP 50005 section 10.11.3 and coordinate operations including coordination of action item closure, recommendations for agenda topics, provision of presentation materials and development of protocols.
 - For Russia, approximately 2 telecons per month and TIM's twice per year at alternating locations between JSC and Russia.
 - For ATV and HTV approximately 2 telecons per month, within four months of flight and TIMs once per year for each vehicle.
 4. Coordinate agenda inputs, track actions and manage action closure for Trash/Waste Integration Group (TWIG) meetings. Attend TWIG meetings. Collect status from team members and provide minutes from TWIG meetings. Incorporate changes in policy or process that are approved by TWIG Chairperson based on meeting discussions into subsequent revision of Management Plan for Waste Collection and

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Disposal (SSP 50481).

5. Curate the WM website. Post updated products to WM website.
 6. Provide WM input to CoFR process as defined in MIO work instructions.
 7. Maintain WM team schedules Integrated Mission Integration Office Schedules (DRD B-PC-06)
- b) Analyze waste generation and consumable projections versus actual data obtained from IMS, crew audit and crew debrief. Provide recommendations to TWIG Chairperson for manifest of waste container consumable resupply and manifest of waste on return vehicles. Manage integrated consumable requirements track adherence to stowage allocations, coordinate planned resupply and disposal and generation and generate and review manifest requests.
- c) Present integrated assessments, including waste volume and disposal status, specific safety or risk issues and R&D issues to internal and external review groups, per their request.
- d) For U.S. items that are candidates to be disposed of on Progress:
1. Collect WM data in support of Requirements for IP Cargoes Transported on Russian Progress and Soyuz Vehicles (II32928-103).
 2. Obtain documented hardware owner validation of disposal request.
 3. Once approved by the TWIG Chairperson, prepare package for submittal to RSC-E including drawings, dimensions and masses.
 4. Coordinate with TWIG Chairperson and incorporate results into integrated assessments.
 5. Provide completed, approved package to RSC-E for evaluation.
- e) Manage and integrate the following mission and post-mission activities:
1. Provide on-call WM support to the IMC. Including provision of recommendation responses to chits that impact waste consumables, stowage and/or disposal.
 2. Develop, coordinate and provide candidate WM lessons learned for each increment. Submit recommendations to TWIG for discussion. Forward lessons learned to IM or LMP upon approval by TWIG Chairperson according to the Post Mission Guidelines (SSP 50168).

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3. According to the process defined in the Post Mission Guidelines (SSP 50168), develop and submit recommendations for debrief questions to TWIG Chairperson one week prior to final submittal; conduct WM post increment crew debriefing and document results. Present debrief results to TWIG team members and incorporate changes in policy, process, usage rate or stowage allocations approved by TWIG Chairperson into Management Plan for Waste Collection and Disposal (SSP 50481).
 4. Identify and track off-nominal waste consumables usage or additional stowage and disposal requirements. Coordinate identified issues, which may impact IP/P or GFE consumable resupply, stowage allocations or disposal capability with the appropriate organizations.
 5. Track and document the consumed life of WM life-limited hardware/supplies to support assessment of impacts on maintenance planning and on-orbit operations.
 6. Coordinate de-integration requirements for waste and/or waste consumables returned via shuttle with the Cargo Mission Integration Contractor.
- f) Document hardware/consumable data in a catalog (reference WM Catalog examples in Appendix C). Incorporate updates and remove items no longer applicable.
- g) Support WM hardware development and procurement:
1. Review, evaluate, integrate and coordinate waste container requirements and constraints. Document in catalog.
 2. Develop and coordinate requirements for the R&D of new or improved WM equipment/supplies, when approved by TWIG Chairperson.
 3. Develop and coordinate requirements for procurement of new or improved WM supplies, when approved by TWIG Chairperson.

4.1.1.5.3 Housekeeping (HK) Integration (LOE)

The HK Integration function coordinates the requirements and materials for HK activities on the ISS. The task requires the contractor interact with and coordinate with IP and program representatives such as hardware providers, crew, manifest representatives, launch package and increment management teams.

The contractor shall:

- a) Provide the following documentation and meeting support:

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1. Develop, integrate, document and manage HK activity requirements. Document in the appropriate ISS Program document per Housekeeping Integration WG (HIWG) Chairperson direction.
 2. Document the HK definitions, roles and responsibilities, operational policies and detailed internal processes. Integrate inputs from technical experts, coordinate updates between submitters and reviewers, document issues and resolutions and maintain technical consistency of the document. Organize and conduct meetings to evaluate changes, distribute actions and track action item closure.
 3. Review and coordinate with MOD flight operations for HK products (i.e. SODF, (JSC 29229) to ensure proper requirements are implemented and constraints are complied as defined in the ISS Program documentation.
 4. Develop, integrate, and provide coordinated HK inputs, as approved by HIWG Chairperson to SPIP Volume 2 (SSP 50200-02) Book Coordinators according to their schedule.
 5. Curate the HK website. Post updated HK integration products to website.
 6. Coordinate agenda inputs, track actions, manage action closure for HIWG meetings. Attend HIWG meetings. Collect status from team members and provide minutes from HIWG meetings. Incorporate changes in policy or process that are approved by HIWG Chairperson based on meeting discussions into subsequent revision of HK documentation.
 7. Coordinate and facilitate telecons and TIM's with Partners, including coordination of action item closure, recommendations for agenda topics, provision of presentation materials and development of protocols. Approximately 1 telecon per month and one TIM per year at alternating locations between JSC and Partner facility.
 8. Develop and update team HK schedule Integrated Mission Integration Office Schedules (DRD B-PC-06).
- b) Analyze housekeeping consumable projections versus actual data obtained from IMS, crew audit and crew debrief. Provide recommendations to HIWG Chairperson for manifest of consumable resupply. Manage integrated consumable requirements, track adherence to stowage allocations, coordinate planned resupply including generation of HK MR's and review manifest requests that impact HK consumables for consistency with HK planning.
- c) Present various topics, such as projected/actual HK consumable usage rates, inventory on-orbit, and projected stowage volume, specific safety or risk issues, and R&D issues to internal and external review groups, per their request.

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- d) Provide detailed HK consumable requirements to NASA and supplying contractor and coordinate fit checks, packing, bench review, and delivery requirements with NASA and the Government Furnished Equipment (GFE) sustaining contractors.
- e) Manage and integrate the following mission and post-mission activities:
1. Provide on-call HK support to the IMC. Including provision of recommended response to chits that impact HK consumables, tasks and/or stowage.
 2. According to the process defined in Post Mission Guidelines (SSP 50168), develop and coordinate HK crew debrief questions, providing recommendations to HIWG Chairperson for approval one week prior to due date, conduct and document results. Present debrief results to HIWG team members and incorporate changes in policy, process, usage rate or stowage allocations approved by HIWG Chairperson into the appropriate ISS Program and internal NASA documents.
 3. Generate and coordinate recommended HK lessons learned for each increment according to the processes defined in Post Mission Guidelines (SSP 50168). Submit recommendations to HIWG for discussion. Forward lessons learned to IM or LPM upon approval by HIWG Chairperson.
 4. Identify and track off-nominal HK consumables usage for additional stowage and disposal requirements. Coordinate identified issues, which may impact IP/P or GFE consumable resupply or stowage allocations with the appropriate organizations. Provide results of data collection to HIWG Chairperson. Incorporate into analysis, as required.
 5. Track and document the consumed life of HK life-limited hardware/ supplies to support assessment of impacts on resupply planning and on-orbit operations.
- f) Document hardware/consumable data in a catalog (reference HK Catalog examples in Appendix C). Incorporate updates and remove items no longer applicable.
- g) Support HK hardware development and procurement in accordance with Flight Crew Integration Standard (NASA-STD-3000/T) (SSP 50005):
1. Review, evaluate, integrate, and coordinate HK materials requirements and constraints. Document in catalog.
 2. Develop and coordinate requirements for the R&D of new or improved HK equipment/supplies, when approved by HIWG.
 3. Develop and coordinate requirements for procurement of new or improved HK supplies, when approved by HIWG.

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4.1.1.6 Imagery

The imagery function manages imagery requirements to support the acquisition, processing, and distribution of imagery of ISS hardware as it is built, assembled, integrated, and operated. The contractor shall perform ISS Imagery program processes as defined in SPIP Volume 2 (SSP 50200-02) Section 5.4 and outlined in the following tasks.

4.1.1.6.1 Imagery Processes (CF)

The contractor shall interface with program representatives, partners, and NASA institutional organizations to maintain ISS Imagery processes:

- a) Book Coordinate the generic program Imagery requirements documentation as defined in 4.1(d) (nominally once per year).
 - ISS Hardware Preflight Imagery Requirements (SSP 50502),
 - Preflight Imagery Requirements for NASA-Provided ISS GFE (SSP 50486)
 - Return, Processing, Distribution and Archiving of Imagery Products from the ISS (SSP 50521)
- b) Provide Imagery updates to SPIP Volume 2 (SSP 50200-02), MIT (SSP 50489), GGR&C (SSP 50261) and MIDS Blank Book (SSP 50622-02) to NASA Imagery WG (IWG) Chairperson. Upon concurrence, provide to Book Coordinators according to their schedules (nominally once per year).
- c) Coordinate, facilitate and conduct upon request telecons and TIM's with Partners, including coordination of action item closure, recommendations for agenda topics, provision of presentation materials, and development of protocols. Approximately three telecons are held per month and face-to-face TIM's are held twice per year at alternating locations between JSC and IP facilities.
- d) Participate in IWG and other meetings to perform Imagery functions. The contractor shall provide status of their products, responses to assigned actions, and identify open issues affecting their Imagery tasks.
- e) Update imagery team schedules and report to NASA weekly (see Integrated Mission Integration Office Schedules (DRD B-PC-6)).
- f) Provide administrative support to the IWG/MIWG as defined in 4.1 (e).
- g) Update program Imagery website as defined in 4.1 (f).

4.1.1.6.2 Pre-Flight Imagery (CF)

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The contractor shall provide flight specific pre-flight coordination functions:

- a) Review inputs from hardware organizations for completeness and control the program Preflight Imagery Plan (PFIP) for each flight through the IWG. The content of this document is defined in the MIDS Blank Book (SSP 50622-02) and the schedule template is defined in the MIT (SSP 50489). This document is delivered by hardware providers and typically includes approximately 2500 images for assembly flights and 250 for logistics flights.
- b) Coordinate resolution of Preflight Imagery Discrepancy Reports between customers and providers. Discrepancies are noted on approximately 10% of images.
- c) Track and report pre-flight imagery submittal status to support the CoFR Process as defined in MIO work instructions.
- d) Coordinate bench review and contingency imagery requirements with Cargo Mission Contractor.

4.1.1.6.3 On-Orbit Imagery (CF)

The contractor shall work with launch package, increment, operations and crew representatives to perform the following tasks:

- a) Book Coordinate the program on-orbit imagery requirements (operations, sustaining engineering/maintenance, and R&D) in IDRD Annex 3 as defined in 4.1(d). Content of the IDRD Annex 3 is defined in the MIDS Blank Book (SSP 50622-02) and the schedule template is defined in MIT (SSP 50489).
- b) Review and validate requests and distribution for imagery products through program websites according to the processes defined in Return, Processing, Distribution and Archiving of Imagery Products (SSP 50521). Validation includes identification of organization supported, role in ISS Program, and NASA POC to insure distribution is for authorized purposes.
- c) Coordinate and maintain downlink procedures for distribution of Electronic Still Camera (ESC) Imagery with MOD and IMC personnel. Procedures are defined in the ESC Ground Processing Requirements document and the Flight Control Operations Handbook (FCOH) (JSC 29229 Section 12.7).
- d) Provide on call support to the IMC to provide recommended responses for imagery related chits.
- e) Report requirements status to support the CoFR Process as defined in MIO work instructions.

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f) Develop, coordinate and provide recommended lessons learned after each flight/increment to the IWG according to the processes defined in Post Mission Guidelines (SSP 50168). Upon IWG concurrence, provide to LPM and IM.

4.1.1.6.4 Special Requirements and Technology Advancement (LOE)

The contractor shall perform the following tasks:

- a) Provide recommendations for upgrades to ISSP facilities to ensure the most efficient use is being made of imagery resources and R&D advancements.
- b) Provide imagery coordination and recommendations for unique requirements such as commercialization, SDTO's, and imagery support to ISS visitors including documentation such as MR's, CR's, SDTO's, project plans, and presentations.
- c) Maintain program knowledge of new imagery technology such as digital imaging, high definition television, transmission and storage techniques.

4.1.1.7 Program Operations Integration (CF)

4.1.1.7.1 The contractor shall assist in the coordination and processing of operational, maintenance/sustaining engineering, and R&D flight rules, in support of ISSPO participation on the Flight Rules Control Board. Specific activities required are:

- a) Serve as ISSPO Point of Contact for all flight rule evaluations.
- b) Identify appropriate ISSP evaluators and distribute Evaluation Packages for internal evaluations.
- c) Contact evaluators for status and to inform them of overdue evaluations.
- d) Develop and maintain flight rules evaluation tracking system.
- e) Consolidate all completed evaluations, comments, and issues and submit them to ISSP Flight Rules Control Board representative for approval.
- f) Provide technical support during Flight Rules Control Board meetings.

4.1.1.7.2 The contractor shall be the Book Coordinator (as defined in 4.1(d)) for the following program documentation, which will nominally be updated once per year:

- a) SPIP Volume 1–Program Management Plan (SSP 50200-01)
- b) SPIP Volume 2–Program Planning and Manifesting (SSP 50200-02)

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- c) Space Station Interior and Exterior Operational Location Coding System (SSP 30575)
- d) CoFR Process Document (SSP 50108)
- f) ISS MIT (SSP 50489)
- g) Onboard Information Technology Operations Concept (SSP 50656)
- h) Post Mission Guidelines

4.1.1.7.3 The contractor shall be responsible for the overall integration of the SPIP volume set. Specifically, the contractor shall:

- a) Ensure the SPIP maintains technical, management, and schedule consistency across all volumes
- b) Maintain and report top-level status of updates and changes to all SPIP volumes (SSP 50200-xx)
- c) Lead resolution of cross volume conflicts, if any.

4.1.1.7.4 The contractor shall be responsible for coordinating changes to SPIP Volume 1, Annex C (SSP 50200-01 Annex C) in support of the Mission Integration and Operations Office.

4.1.1.7.5 (LOE) The contractor shall perform ISS and/or related R&D special projects/actions in support of program office objectives. Nominally there will be two to three such projects per year. Specifically, the contractor shall:

- a) Assist in developing the definition and scope of the assigned special project/action.
- b) Establish/develop agendas, schedules, analyses, reports, presentation charts and other reference materials.
- c) Track, coordinate, and report status of issue resolution plans.
- d) Consolidate all completed evaluations, comments, and issues into final form and then submit them to the NASA Manager for approval. Final document quality shall be suitable for presentation to Senior NASA Management.

4.1.1.7.6 The contractor shall serve as POC for CM CR processes and evaluations and manage the office specific CR review process including tracking of evaluations, consolidation of comments and identification of issues.

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4.1.1.8 Reserved**4.1.1.9 On-Orbit Stowage Capabilities and Configuration**

On-orbit stowage includes the integration of all on-orbit stowage requirements across the ISSP.

4.1.1.9.1 Internal Stowage Capabilities and Configuration (CF)

The contractor assumes responsibility for maintenance and future development of internal stowage products and services required to manage internal ISS stowage. The task requires the contractor interact and coordinate with program representatives such hardware providers, manifest representatives, crew, launch package and increment management teams.

To accomplish the internal stowage capabilities and configuration task, the contractor shall:

- a) Perform the following stowage management functions:
 1. Book Coordinate (as defined in 4.1(d)), Generic On-Orbit Stowage Capabilities and Requirements (OSCAR) (SSP 50621) and flight appendices (SSP 50621 –XX). Update Generic OSCAR annually.
 2. Provide inputs to CoFR as defined in MIO work instructions for on-orbit stowage plan verification and cargo translation through the ISS and to/from visiting vehicles. Coordinate with Cargo Mission contractor to verify as-stowed configuration is used for cargo to be translated to/from visiting vehicles in packing material.
 3. Generate presentations and provide technical explanation of stowage processes and lessons learned to IPs and other customers in the development of their on-orbit stowage requirements and capabilities for new pressurized modules.
 4. Coordinate, integrate and document on-orbit stowage capabilities for all ISS elements. Capability shall be documented in SSP 50621, Generic On-Orbit Stowage Capabilities and Requirements (OSCAR).
 5. Coordinate, facilitate and conduct upon request telecons and TIM's with Partners, including coordination of action item closure, recommendations for agenda topics, provision of presentation materials and development of protocols. Approximately 4 telecons per month and 4 TIM's per year at alternating locations between JSC and Partner facility.
 6. Develop, document, and maintain stowage integration tools and electronic interfaces with applicable NASA databases and software applications.

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7. Curate the stowage website.
 8. Maintain stowage team schedules Integrated Mission Integration Office Schedules (DRD B-PC-06).
- b) Manage the following stowage planning activities:
1. Review and analyze manifest requests for compliance with documented on-orbit stowage allocations. Document and report results to IMT. (Approximately 100 MRs per month).
 2. Review requirements and provide technical assessments and analysis for translation of cargo between visiting vehicles and ISS and internal to ISS. Document results and provide data to LP and IM teams.
 3. Produce approximately four on-orbit stowage hardware mock-ups per year to support translation analysis and general stowage planning and verification.
 4. Provide technical stowage configuration and constraint data in support of crew training. This effort requires approximately 8 hours per shuttle mission.
- c) Manage and integrate the following mission and post-mission activities for internal stowage:
1. Document and track cargo allocations in support of IMT.
 2. Perform assessments and analysis of stowage configuration and available stowage locations, as required. Report usage of increment specific operational and R&D storage allocations by category to IMT. Report comparison of stowage requirements vs. allocations to IMT and MIOCB and to RIP if allocations are exceeded.
 3. Provide real-time on-console IMC support for key stowage activities and on call support at other times for on-orbit stowage issues and problem resolution.
 4. According to the processes defined in the Post Mission Guidelines (SSP 50168), develop and submit recommended debrief questions to Stowage Integration Manager one week prior to submittal, conduct document minutes from debrief. Incorporate changes to documentation and planning as approved by Stowage Integration Manager.
 5. Develop and coordinate candidate lessons learned for each increment according to the processes defined in the Post Mission Guidelines (SSP 50168). Submit recommendations to Stowage Integration Manager. Forward lessons learned to Increment Manager or LPM upon approval by Stowage Integration Manager.

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4.1.1.9.2 Tactical Internal & External Volume Configuration (LOE)

a) The Internal Volume Configuration (IVC) management task involves the understanding and oversight of hardware and systems within the ISS, especially as they relate to human factors interfaces. The overall IVC includes the integration of stowage, rack and installed/deployed hardware protrusions, R&D hardware, and loose equipment.

The contractor shall provide the technical and managerial support services required to accomplish the following IVC tasks:

1. Transition strategic plans developed by the PI&C contractor to the tactical timeframe. Review integrated internal volume configuration assessments and topologies. Provide feedback to the IVCWG.
2. Define and maintain criteria for evaluating and prioritizing internal volume demands in Generic Ground Rules and Constraints (SSP 50261-01), Section 3.12, in cooperation with the IVCWG, and U.S. and IP hardware providers, and in accordance with Flight Crew Integration Standard (NASA-STD-3000/T) (SSP 50005). Submit recommended GGR&C changes to GGR&C Book Coordinator and coordinate resolution of all technical issues and concerns for programmatic change approval.
3. Develop, incorporate and maintain tactical and real-time IVC-tracked hardware CAD models, as required (i.e. laptops, stowage provisions). Provide CAD models Sustaining Engineering contract CAD model team. Incorporate into integrated 3D CAD models of ISS interior provided by PI&C contractor.
4. Provide proposed configurations identified during the tactical phase to the IVCWG and the PI&C contractor for analysis. Review resulting analysis. Coordinate with Increment teams. Develop and coordinate briefings and present to IMT, RIP, MIOCB and other program meetings, as required.
5. Identify, work to resolution and document operational constraints, GGR&C violations and accepted protrusions during tactical planning and real-time operations. Identify new flight rules and provide inputs to ISSP POC for flight rule evaluations.
6. Develop and maintain IVC plans and guidelines for use of available internal volume for each flight and stage, beginning in the tactical timeframe. Deliver per IVC team schedule.
7. Collect data from IMC (primary interface), MER and on-console flight controllers to track real-time IVC on a periodic basis. Document updates to IVC plans and

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guidelines to reflect actual configuration. Deliver data per IVC team schedule (DRD B-PC-06).

8. Curate the tactical IVC website. Post updated IVC products to website.
 9. Provide IVC input to CoFR process. This includes GGR&C waivers.
 10. Update tactical IVC team schedules monthly (DRD B-PC-06).
 11. Identify and submit IVC questions for crew debrief according to the processes defined in the Post Mission Guidelines (SSP 50168).
 12. Develop, coordinate and provide recommended lessons learned according to the process defined in the Post Mission Guidelines (SSP 50168).
- b) The contractor assumes responsibility for technical expertise relating to the external ISS configuration that may be allocated for stowage of cargo. The contractor shall:
1. Identify and document available and used external allocatable stowage locations using existing program engineering and CM data sources. Function as point of contact to the IMTs.
 2. Document critical data including part number, serial number, lifetime, quantity and planned use for externally stowed hardware using existing ISSP engineering and CM data sources.
 3. Review products generated by the Assembly and Configuration Team to identify potential conflicts and issues to the real time and tactical external standard and non-standard stowage plan.
 4. Identify and coordinate the resolution of actions and issues that cross increments or that would impact the tactical and/or real-time operations planning with the Configuration WG. Provide recommendations to the NASA Stowage POC for resolution.

4.1.1.9.3 Plug-In Plan (CF)

The contractor shall perform the following ISS Plug-in Plan tasks:

- a) Provide analysis of the ISS and R&D mission-unique power, data and video plug-in plans for the on-orbit ISS internal environment and develop cable routing diagrams. Updates provided for each shuttle mission to ISS.

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- b) Provide real-time on-console or on-call support to ISS operations with assessments and recommendations to the FCT for plug-in of equipment and cable routing and problem resolution.
 - c) Integrate and document generic ISS power, data, and video connectivity capabilities and requirements for all modules. Book Coordinate Generic On-Orbit Plug-in Plan (PIP) Capabilities and Requirements (SSP 50627) document.
 - d) Integrate and document ISS power, data and video connectivity requirements for systems and R&D hardware. Document stage-unique requirements and capabilities for all modules and post to IVC website.
 - e) Curate the Plug-in Plan websites.
 - f) Provide Plug-in Plan inputs to CoFR process. This includes GGR&C waivers, and ISS Plug-in Plan verification.
 - g) Update Plug-in Plan schedules monthly (DRD B-PC-06).
 - h) Identify and submit Plug-in Plan questions for crew debriefs and recommended lessons learned according to the processes defined in the Post Mission Guidelines (SSP 50168).

4.2 Reserved**5.0 RESERVED****6.0 SAFETY AND MISSION ASSURANCE (CF)**

The Agency Safety Initiative establishes the NASA safety hierarchy – the order NASA will use to prioritize its safety efforts. The safety hierarchy is as follows:

1. Safety for the Public – NASA absolutely must protect the public from harm.
2. Safety for Astronauts and Pilots – NASA has to protect them as they expose themselves to risk in high hazard flight regimes.
3. Safety for NASA Workforce – NASA is responsible for providing a safe and healthful workplace.
4. Safety for High-Value Equipment and Property – NASA is a steward of the public's trust.

By focusing on the safety of NASA's mission and operations, NASA will improve quality and decrease cost and schedule.

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6.1 S&MA Management**6.1.1 Mission Assurance and Risk Management Plan**

The contractor shall develop, maintain, and implement a Mission Assurance and Risk Management (MA&RM) Plan in accordance with Mission Assurance and Risk Management Plan (DRD B-SA-01).

6.1.2 AS9100

The contractor shall establish and maintain a Quality Management System that complies with Model for Quality Assurance in Design/Development, Production, Installation and Servicing (AS9100). Third party certification/registration is not required. If the contractor is AS9100 registered and subsequently changes registrars, loses registration status, or is put on notice of losing registration status, the contractor shall notify the NASA CO within three (3) days of receiving such notice from the registrar.

6.1.3 Audit/Surveillance

The contractor shall provide access to data, personnel, and facilities for government audit/surveillance of contractor plans, procedures, and processes when deemed necessary by the government. The contractor shall provide written responses to audit/surveillance findings that are delivered to and accepted by the government.

6.1.4 Mishap Investigating and Reporting

The contractor shall investigate and report their mishaps in accordance with NASA Procedures and Guidelines for Mishap Reporting, Investigating, and Record keeping (NPG 8621.1) and NASA Safety Manual with Changes through Chapter 1, 6/19/02 (NPG 8715.3). The contractor shall perform mishap reporting and provide summary data on their mishaps in accordance with requirements at the NASA installation where the mishap occurs:

- JSC-JPG 1700.1, JSC Safety and Total Health Handbook
- KSC-KHB 1710.2, Kennedy Space Center Safety Practices Handbook

All investigation reports shall include a human factors assessment, root cause analysis, and any remedial/corrective actions performed. These reports shall encompass mishaps occurring during the contracted period as follows:

- All mission failures and type A and B mishaps resulting in injury to contractor personnel or equipment damage occurring onsite at NASA facilities and offsite at contractor facilities.
- Type C mishaps resulting in equipment damage onsite at NASA facilities and offsite at contractor facilities.

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- Type C mishaps resulting in injury to contractor personnel located onsite at NASA facilities.
 - Incidents and close call occurring onsite at NASA facilities.

The contractor shall develop and maintain a current call tree with government contacts for the reporting of a mishap, near-miss incident, equipment problem, or a system going out of specification. The contractor shall use the call tree to report incidents and problems within four hours of the occurrence. Type C injury mishaps occurring offsite at contractor facilities shall be reported in a monthly summary of such injuries.

6.1.5 Safety and Health

The contractor shall develop and implement a process to ensure that personnel and property will be protected from injury or harm throughout the performance of the contract. The process shall provide for hazardous operation surveillance, hazardous procedure review, and risk assessments associated with deviations from procedures or safety and health requirements. The contractor shall comply with NASA installation safety and health requirements and related processes when performing contract work onsite at NASA installations. The contractor shall develop, implement and maintain a Safety and Health (S&H) Plan in accordance with the Safety and Health Plan (DRD B-SA-02). Upon approval, the S&H Plan shall be incorporated into the contract as Attachment J-3. The contractor shall document the assessments in monthly safety and health metrics in accordance with Monthly Safety and Health Metrics (DRD B-SA-03) and perform an annual self-evaluation in accordance with Safety and Health Program Self-Evaluation (DRD B-SA-04).

6.1.6 Lessons Learned

The contractor shall develop, update, and implement a process to capture, disseminate, and implement mishap related lessons learned, both positive and negative, in accordance with NASA Procedures and Guidelines for Mishap Reporting, Investigating, and Record keeping (NPG 8621.1). For non-mishap related lessons learned, the contractor shall meet NASA Program and Project Management Processes and Requirements (NPG 7120.5) and enter the lessons learned into the government provided database in accordance with JSC Lesson Learned Process (AG-CWI-001). The lessons learned shall be entered within 6 weeks after triggering event, or completion of mishap investigation or hazard analysis evaluation.

6.2 S&MA Integration**6.2.1 Change Review Recommendation**

The contractor shall review ISS change requests and operational/design decisions and provide recommendations for S&MA impacts.

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6.2.2 Certification of Flight Readiness (CoFR)

The contractor shall perform the S&MA CoFR assessment in accordance with ISSP Certification of Flight Readiness document (SSP 50108). The assessment shall focus on tasks required by Section 6.0 of this SOW. This includes identification of flight/stage-level open work, issues, and exceptions; and certification status of all manifest items.

6.3 Program Risk**6.3.1 Risk Management**

The contractor shall identify risks and provide input to the ISS risk process utilizing Integrated Risk Management Application (IRMA) in accordance with the ISS Risk Management Plan (SSP 50175) and Establishment of the Program Risk Management System (JPD 306). The contractor shall provide training and tools for all MIC employees to effectively and efficiently identify threats and possible risks to successful completion of assigned tasks. The contractor shall coordinate identified risks with NASA counterparts.

6.3.2 Reserved**6.4 ISS Safety Program****6.4.1 ISS Safety Assessment**

The contractor shall perform a flight and/or stage specific integrated safety assessment for Mission Integration in accordance with ISS Generic Ground Rules and Constraints (SSP 50261-01 and -02), Safety Requirements Document (SSP 50021) and Safety Analysis and Risk Assessment Requirements Document (SSP 30309). The contractor shall develop the safety assessments in accordance with Hazard Reports and System Description (DRD B-SA-05). Safety assessments shall focus on actual and/or planned cable drag-thrus, hardware/cargo stowage, waste management and internal volume configuration assessments. Additionally, the safety assessment shall include focus on manifest priorities, increments, mission templates and the planning periods.

The contractor shall obtain program approval in accordance with the Safety Review Process (SSP 30599). This requires supporting the appropriate Safety Review Panels, ISS Boards, teleconferences, and WGs.

6.4.2 Safety Requirement Verification

The contractor shall perform appropriate verification to prove compliances to the ISS Generic Ground Rules and Constraints and Safety requirements. The contractor shall deliver supporting safety assessment documentation in accordance with Hazard Reports and System Description

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6.5 **Reserved**

6.6 **Reserved**

6.7 **Reserved**

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SECTION J-1 APPENDIX A:**KEY TERMS****AUTHORIZED SOURCES**

Sources that contain data or information that has been approved by the appropriate NASA program boards, panels, or management level.

BOOK COORDINATOR

A function that provides for developing new documents or updates to existing documents including integrating inputs from technical experts, coordinating updates between submitters and reviewers, documenting resolutions, and maintaining the technical consistency of the document. Tasks also include updating the document using CR's per the agreed upon schedule in the MIT (or NASA approved schedule for items not covered by the MIT), interfacing with CM and DQA, coordinating inputs and tracking communications from the partners regarding the documents and includes development of NDC's for documents that affect RSC-E, and coordinating translations. Also included are coordinating and conducting TCM's, production and distribution of minutes and actions, tracking closures, and developing and making presentations to the MIOCB as required for document CR approvals.

CARGO ELEMENT

A flight element that has physical and/or functional interfaces to the LV.

CHIT

Ground Processing CHITs document changes at JSC and KSC for ground processing requirements and Mission Action Request CHITs document real-time operation action requests.

CONTROL BOARD

A management forum which establishes and controls changes to the programmatic baseline and associated documentation and provides a forum for resolving related technical and schedule issues. The specific board scope, responsibilities, authority and membership are defined in the charter.

CONTROL PANEL

A subordinate forum to a parent control board with delegated responsibility and control as defined in the charter.

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CURATOR

The person responsible for publishing and maintaining the information on a web home page.

FLIGHT DATA FILE (FDF)

Procedures used by Shuttle crew members to perform on-orbit tasks. A complete set of books is produced for each mission that contains generic and flight-unique procedures for nominal and contingency operations.

FUNCTION

A separate and distinct action required to achieve a given objective, to be accomplished by the use of hardware, computer programs, personnel, facilities, procedures data, or a combination thereof; an operation that must be performed to fulfill its mission or reach its objectives.

ELEMENT MANAGER

Responsible for managing the overall design, development, fabrication, test, and integration of assigned elements. Manages the overall definition, development and implementation of element integration processes in order to deliver functional element end-items to the ISS on orbit and to assure the integrated element satisfies the required architecture and functionality.

ENGINEERING RELEASE UNIT (ERU)

A position within the Configuration Management organization that accepts electronic and hard copy data for release to a library system.

INCREMENT

The time frame of each crew expedition. The duration of an increment is the time period from the launch of a designated flight crew to the landing of the return vehicle for that crew.

INTERNAL VOLUME CONFIGURATION (IVC)

The integrated internal configuration of the ISS including installed, deployed and stowed hardware and materials.

INCREMENT DEFINITION REQUIREMENTS DOCUMENT

Documentation of ISS Program requirements for the flights and increments within a planning period. These include the launch dates, traffic plans, top-level manifest, resource allocations, and specific flight/increment requirements.

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ISSP MANAGEMENT CENTER

A program facility in the MCC to support real-time ISS operations that is staffed and operated by program personnel.

INFORMATION TECHNOLOGY

Any equipment or interconnected system or subsystem of equipment that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission or reception of data or information that is used by ISSP. IT includes computers, ancillary equipment, software, firmware, and similar procedures, services (including support services), and related resources.

INTERNATIONAL PARTNER/PARTICIPANT

Those non-U.S. space agencies that formally participate in the ISS. International partners include to Canadian Space Agency (CSA), European Space Agency (ESA), National Space Development Agency of Japan (NASDA), and Russian Aviation and Space Agency (Rosaviakosmos). International Participants include the Italian Space Agency (ASI), and the Brazilian Space Agency (AEB).

LAUNCH PACKAGE

Full complement of ISS hardware and software delivered on a flight to the ISS.

MANAGEMENT INFORMATION SYSTEM (MIS)

A computerized information-processing system designed to keep ISSP and other personnel apprised of the most current ISS technical, financial, workforce, schedule and operational information, including issues and risks. MIS links ISS core business issues and goals with the technical aspect of the Program.

MISSION INTEGRATION AND OPERATIONS CONTROL BOARD (MIOCB)

The MIOCB is the board responsible for Mission Integration and Operations products and processes for the ISS. The board may meet in a unilateral, bilateral or multi-lateral mode.

MISSION INTEGRATION PLAN (SHUTTLE)

Document the requirements and constraints for Shuttle operations support to ISS increment operations including ascent and descent, flight requirements for ISS CEs, and joint operations while the Shuttle is attached to the ISS.

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NOTIFICATION OF DOCUMENT CHANGE (NDC)

Process developed specifically for Russia to enable documentation updates to proceed with interim approval from the contractor while formal Rosaviakosmos approval is pending.

PARTNER

When used in this document, refers to NASA, CSA, ESA, NASDA, and Rosaviakosmos.

PAYLOAD

If not otherwise modified, “payload” in this document refers to an ISSP scientific or technology payload.

PLANNING PERIOD

Approximately one calendar year, adjusted by the timing of crew rotations.

STAGE

On-orbit configuration of the ISS after each shuttle flight which adds capability to the ISS.

STATION OPERATIONAL DATA FILE (SODF)

Procedures used by ISS crew members to perform on-orbit tasks in the USOS and across segments. A complete set of books is produced for each mission that contains generic and increment unique procedures for nominal and contingency operations. These books are contained in an electronic library on ISS. A subset of these procedures is also provided in hardcopy.

STRATEGIC

Long term planning that generally transitions to tactical at two years prior to real-time operations.

TACTICAL

Period of time from 2 years until implementation phase or “real-time”.

TECHNICAL INTERCHANGE MEETING

Meetings between two or more ISS Program technical teams to exchange information, develop processes, and work issues.

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TECHNICAL INTEGRATOR

Function used in the Increment Management Team to support book managers in processing documents providing coordination with CM DQA, and supporting IDRDR Blank Book development. Senior administrative assistant.

TRANSITION PERIOD

60 day period prior to contract start date.

VEHICLE

The whole integrated on-orbit space station (including hardware and software) as it exists today and the future station as it evolves. The vehicle configuration is defined by the particular point in time under assessment or discussion.

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SECTION J-1: APPENDIX B**ACRONYM LIST**

ANF	Arrival Notification Form
ARISS	Amateur Radio on International Space Station
ASAP	Aerospace Safety Advisory Panel
ASI	Agenzia Spaziale Italiana
ATV	Automated Transfer Vehicle
BCC	Backup Control Center
BHSEALS	Bilateral Hardware/Software Exchange Agreement List
BIMSWG	Bilateral Inventory Management System Working Group
CAD	Computer Aided Design
CAM	Centrifuge Accommodation Module
CEA	Center Export Administrator
CM	Configuration Management
CMM	Capability Maturity Model
CMRD	CM Receipt Desk
CO	Contracting Officer
CoFR	Certification of Flight Readiness
COTR	Contracting Officers Technical Representative
CPMP	Crew Provisioning Management Plan
CPR	Cost Performance Report
CPWG	Crew Provisioning Working Group
CR	Change Request
CRV	Crew Return Vehicle
CSA	Canadian Space Agency
CSD	Common Schedules Database
DEV	Dual Entry Visa
DIDs	Data Item Description
DM	Data Management
DQA	Document Quality Assurance
DRD	Data Requirement Description
DSSR	Daily Space Station Review Board
EAR	Export Administration Regulations
ECP	Export Control Plan
ECLSS	Environment Control & Life Support System
ERU	Engineering Release Unit
ESA	European Space Agency
ESC	Electronic Still Camera
EST	Export Services Team
EVA	Extravehicular Activity
FP	Flight Program
FCOH	Flight Control Operations Handbook

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FCT	Flight Control Team
FDF	Flight Data File
FOR	Fight Operations Review
FPWG	Flight Program Working Group
FRR	Flight Readiness Review
GAO	General Accounting Office
GCTC	Gagarin Cosmonaut Training Center
GFD	Government Furnished Data
GFE	Government Furnished Equipment
GGR&C	Generic Groundrules, Requirements and Constraints
GOR	Ground Operations Review
HIWG	Housekeeping Integration Working Group
HK	Housekeeping
HQ	NASA Headquarters
HSFP-R	Human Space Flight Program-Russia
HSG	Houston Support Group
HTV	H-II Transfer Vehicle
IBMP	Institute of Bio-Medical Problems
ICA	Interface Control Agreement
ICD	Interface Control Document
ID	Identification
IDRD	Increment Definition and Requirements Document
IDRP	Increment Definition and Requirements Plan
IE	Increment Engineers
IG	Inspector General
IIR	Independent Implementation Review
IM	Increment Manager
IMC	ISSP Management Center
IMCE	ISS Management and Cost Evaluation
IMCOH	IMC Operations Handbook
IMMT	ISSP Mission Management Team
IMS	Inventory Management System
IMT	Increment Management Team
IOR	Increment Operations Review
IP	International Partner
IPOP	ISS Program Off-Nominal Situation Plan
IP/P	International Partner/Participant
IRMA	Integrated Risk Management Application
IRR	Increment Readiness Review
ISS	International Space Station
ISSPO	International Space Station Program Office
ISPPD	International Space Station Planning Process Document
ITAR	International Traffic in Arms Regulations

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ITD	International Travel Database
IVA	Intra-vehicular Activity
IVC	Internal Volume Configuration
IVCWG	Internal Volume Configuration Working Group
IWG	Imagery Working Group
JARSWG	Joint American Russian Safety Working Group
JEM	Japanese Experiment Module
JLEC	JSC Language Education Center
JOP	Joint Operations Panel
JPG	JSC Procedures and Guidelines
JSC	Johnson Space Center
KSC	Kennedy Space Center
LOI	Letter of Invitation
LP	Launch Package
LPE	Launch Package Engineer
LPM	Launch Package Manager
LPT	Launch Package Team
LRR	Launch Readiness Review
LSIO/KSC	Launch Site Integration Office at KSC
MCC	Mission Control Center
MER	Mission Evaluation Room
MEV	Multiple Entry Visa
MIC	Mission Integration Contract
MIDAS	Mission Integration Database Application System
MIDS BB	Mission Integration Data Set Blank Book
MIM	Multi-Increment Manifest
MIO	Mission Integration and Operations
MIOCB	Mission Integration Operations Control Board
MIP	Mission Integration Plan
MIS	Management Information System
MIT	Mission Integration Template
MIWG	Multi-lateral Imagery Working Group
MLO	Moscow Liaison Office
MMIOCB	Multilateral Mission Integration Operations Control Board
MOD	Mission Operations Directorate
MOU	Memorandum Of Understanding
MPLM	Multi Purpose Logistics Module
MR	Manifest Requests
MSFC	Marshall Space Flight Center
MSRF	Meeting Support Request From
MTLO	Moscow Technical Liaison Office
MWG	Manifest Working Group
NAC	NASA Advisory Council

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NASA	National Aeronautics and Space Administration
NASDA	National Space Development Agency of Japan
NCR	Nonconformance Requirements
NDC	Notification of Document Change
NISN	NASA Integrated Services Network
NMLO	NASA Moscow Liaison Office
NPG	NASA Procedures and Guidelines
ODF	Operations Data Files
ONS	Off Nominal Scenarios
OSCAR	On-Orbit Stowage Capabilities and Requirements
PFIP	Preflight Imagery Plan
PI&C	Program Integration and Control
PIER	Post Increment Evaluation Report
PMOIP	Program Manager Operations Integration Procedures
PMR	Performance Management Reviews
PMS	Performance Measurement System
POP	Program Operating Plan
PP	Planning Period
PR	Program Risk
PRR	Payload Readiness Review
QA	Quality Assurance
R&D	Research and Development
RIO	Russian Interface Officer
RIP	Requirements Integration Panel
RM	Resource Management
RMDP	Return Manifest Disposition Plan
Rosaviakosmos	Russian Aviation and Space Agency
RS	Russian Segment
RSC-E	Rocket Space Corporation-Energia
RSET	Russian Simulation Execution Team
S&MA	Safety and Mission Assurance
SDTO	Station Development Test Objective
SDTOC	Station Development Test Objective Catalog
SEF	Service Evaluation Form
SEV	Single Entry Visa
SFAC	Space Flight Advisory Committee
SIR	Stage Integration Review
SODF	Station Operations Data File
SORR	Stage Operations Readiness Review
SOW	Statement of Work
SPIP	Station Program Implementation Plan
SSCB	Space Station Control Board
SSCN	Space Station Change Notice

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SSP	Space Station Program
SSUAS	Space Station Utilization Advisory Subcommittee
TBD	To Be Determined
TCM	Technical Change Meetings
TDY	Temporary Duty
TIM	Technical Interchange Meeting
TRF	Translation Request Form
TsUP	Mission Control Center Moscow
TWIG	Trash/Waste Integration Group
USOS	U.S. Operating Segment
VMDB	Vehicle Master Database
WBS	Work Breakdown Structure
WG	Working Group
WM	Waste Management

NNJ04AA02C**(SECTION J-1 Appendix C) Mission Integration Contract****1 of 9****J-1 APPENDIX C****MISSION INTEGRATION CONTRACT APPLICABLE DOCUMENTS**

The documents identified below are cited within the body of this contract or within a document that is cited in this contract (second tier). Requirements written in these documents have full force and effect as if their text were written in this contract; however, only the requirements pertaining to the specific call out are applicable. The current version of the document applies as defined in the MIC Applicable Document Index report provided by COSMOS:

Document Number/Identifier	Document Title	Managed by MIC
AG-CWI-001	JSC Lesson Learned Process	
ANSI/EIA-748-98	Industry Guidelines for Earned Value Management Systems	
AS9100	Quality Systems - Aerospace - Model for Quality Assurance in Design, Development, Production, Installation, and Servicing	
FSN-210.8	Foreign Service National Translator Series	
ISSP-PPD-517	Crew Provisioning Working Group (CPWG) Charter	√
ISPPD	Integrated Schedules Planning Process Document	
ISSP-MD-114	Russian Travel Management Directive	
JPD 306	Establishment of the Program Risk Management System (PRMS)	
JPG 1700.1	JSC Safety and Health Handbook	
JPG 2810.1	Johnson Space Center IT Security Handbook	
JSC 36455	Interpreter Training and Certification Guide	
JSC Form 1240	JSC Notice of Safety or Health Hazard and Action Plan	
KHB 1710.2	Kennedy Space Center Safety Practices Handbook	
K-SS-12.17	International Space Station and Payloads Receiving and Shipping Guideline	
No Number	ISS Lexicon	√
No Number	ISS Management Center Operations Handbook (IMCOH)	√
No Number	Launch Package Work Instructions; CoFR Overview; Presentation	√
No Number	Launch Package Work Instructions; Manifest Strategies; Presentation for accommodating payloads on flights between 12A –15A	√
No Number	Launch Package Work Instructions; Mission Integration and Operations Office (OC) Excess Hardware Return Plan	√
No Number	Launch Package Work Instructions; Off-Nominal Situation (ONS)	√
No Number	Launch Package Work Instructions; OC Launch Package Stage Integration Review (SIR) Participation	√

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MISSION INTEGRATION CONTRACT APPLICABLE DOCUMENTS (CON'T)

Document Number/Identifier	Document Title	Managed by MIC
No Number	Launch Package Work Instructions; OCR Process: Reference information to help understand the integration process	√
No Number	Launch Package Work Instructions, Requirements/Procedures Audit	√
No Number	Launch Package Work Instructions; Standardized Payload Readiness Review Presentation Content	√
No Number	Launch Package Work Instructions; Transfer Cue Card Reviews; Process development information	√
No Number	Program Management Operations and Integration Procedures (PMOIP)	√
NPD 1440.6	NASA Records Management	
NPD 9501.1	NASA Contractor Financial Management Reporting System	
NPD 9501.3	Earned Value Management	
NPG 7120.5	NASA Program and Project Management Processes and Requirements	
NPG 2810.1	Security of Information Technology	
NPG 8621.1	NASA Procedures and Guidelines for Mishap Reporting, Investigating, and Record keeping	
NPG 8715.3	NASA Safety Manual	
NPG 9501.2	NASA Contractor Financial Management Reporting	
NPG 9501.3	Earned Value Management Implementation on NASA Contracts	
NSTS 21000-SIP -MIP (ISS)	Shuttle/Launch Package Standard Integration Plan for International Space Station Missions	
OSHA TED 8.4, Appendix H	Voluntary Protection Program (VPP); Policies and Procedures Manual	
SSP 30219	Space Station Reference Coordinate Systems	
SSP 30309	Safety Analysis and Risk Assessment Requirements Document	
SSP 30575	Space Station Interior and Exterior Operational Coding System	√
SSP 30599	Safety Review Process	
SSP 41170	ISS Program Configuration Management Requirements	
SSP 50005	Flight Crew Integration Standard (NASA-STD-3000/T)	
SSP 50007	Space Station Inventory Management System Label Specification	
SSP 50010	Documentation Standards and Guidelines	

NNJ04AA02C**(SECTION J-1 Appendix C) Mission Integration Contract****3 of 9****MISSION INTEGRATION CONTRACT APPLICABLE DOCUMENTS (CON'T)**

Document Number/Identifier	Document Title	Managed by MIC
SSP 50013	Information System Plan	
SSP 50021	Safety Requirements Document	
SSP 50094	NASA/RSA Joint Specifications/Standards Document for the Russian Segment	
SSP 50108	International Space Station Program Certification of Flight Readiness Process Document	√
SSP 50110	Multi-Increment Manifest	
SSP 50112	Operations Summary	
SSP 50123	Configuration Management Handbook	
SSP 50136	NASA/RSA BHSEALS	√
SSP 50168	Post Mission Guidelines	√
SSP 50173	MIDAS to Cargo Flow, Maintenance, and Inventory Database	√
SSP50174	MIDAS to VMDB Interface Control Document	√
SSP 50175	ISS Program Risk Management Plan	
SSP 50200-01	Station Program Implementation Plan (SPIP) Volume 1: Station Program Management Plan	√
SSP 50200-01 AnxC	Station Program Implementation Plan (SPIP) Volume 1 Annex C	√
SSP 50200-02	Station Program Implementation Plan (SPIP) Volume 2: Program Planning and Manifesting	√
SSP 50219	NASA/ASI BHSEALS	√
SSP 50220	NASA/CSA BHSEALS	√
SSP 50222	IT Capital Investment Process	
SSP 50261-01	Generic Groundrules, Requirements, and Constraints Part 1: Strategic and Tactical Planning	√
SSP 50261-02	Generic Groundrules, Requirements, and Constraints Part 2: Executive Planning	√
SSP 50264	NASA/NASDA BHSEALS for the JEM	√
SSP 50289	NASA/ESA BHSEALS	√
SSP 50408	NASA/ESA BHSEALS for Cupola	√
SSP 50409	Crew Provisioning Management Plan	√
SSP 50448	Station Development Test Objective (SDTO) Catalog	√

NNJ04AA02C**(SECTION J-1 Appendix C) Mission Integration Contract****4 of 9****MISSION INTEGRATION CONTRACT APPLICABLE DOCUMENTS (CON'T)**

Document Number/Identifier	Document Title	Managed by MIC
SSP 50477	Joint Crew Provisioning Catalog	√
SSP 50481	Management Plan for Waste Collection and Disposal	√
SSP 50486	Preflight Imagery Requirements for NASA-Provided ISS Government Furnished Equipment	√
SSP 50489	ISS Mission Integration Template	√
SSP 50502	ISS Hardware Preflight Imagery Requirements	√
SSP 50521	Return, Processing, Distribution and Archiving of Imagery	√
SSP 50562	ISS Program Off-Nominal Situation Plan (IPOP)	
SSP 50576	NASA/RSA Bilateral Agreement - Shipping/Receiving Process for ISS Flight Hardware	√
SSP 50578	ISS Cargo Certification Process	
SSP 50621	On-Orbit Stowage Capabilities and Requirements (OSCAR): Pressurized Volume	√
SSP 50622-02	Mission Integration Data Set Blank Book	
SSP 50627	Generic On-Orbit Plug-in Plan (PiP) Capabilities and Requirements	√
SSP 50647	Mission Integration Database Application System to the CIDMT Interface Control Document	√
SSP 50656	Onboard Information Technology Operations Concept	√
SSP 50659	International Space Station Work Breakdown Structure	
SSP 54002	Increment Definitions and Requirements Document Blank Book	√
Π32928-103	Requirements for International Partner Cargoes Transported on Russian Progress and Soyuz Vehicles	

NNJ04AA02C**(SECTION J-1 Appendix C) Mission Integration Contract****5 of 9****MISSION INTEGRATION CONTRACT REFERENCE DOCUMENTS**

Document Number/Identifier	Document Title	Managed by MIC
Clinger-Cohen Act of 1996	IT Management Reform Act	
DD 254	Contract Security Classification Specification	
Executive Order 13011	Federal IT	
FED-STD-313	Material Safety Data, Transportation Data and Disposal Data for Hazardous Materials Furnished to Government Activities	
ISAC 237	International Travel Database (ITDB) Requirements Document	√
ISAC 253-UG	International Travel Database (ITDB) User's Guide	√
ISAC 305	International Travel Database (ITDB) Release 4.4 Design Document	√
ISAC 324-REQ-84	Mission Integration Database Application System (MIDAS) Release 8.4 Requirements Document	√
ISAC 324-UG-83	Mission Integration Database Application System (MIDAS) User's Guide 8.3	√
ISAC-328 DSN-84	Mission Integration Database Application System (MIDAS) Release 8.4 Design Document	√
ISAC 343-DSN-351	Application Tracking Application (ATA) Release 3.5.1 Design Document	
ISAC 343-REQ-351	Application Tracking Application (ATA) Release 3.5.1 Requirements Document	
ISS_card_zip	ISS Cost Analysis Requirements Description (CARD)	
ISS CARD ReadMe.ppt	ISS CARD Introduction	
JPD 2800.1	JSC IT Program	
JPD 2800.4	JSC IT Program Management	
JSC 16768	Flight Crew Equipment Landing Site Dispositioning Manual (Example)	
JSC 25187, Appendix A	Flight Production Generic Template	
JSC 29229 Section 12.7	Flight Control Operations Handbook (FCOH) - Station Operations Section 12.7	
JSC 36340	Houston Support Group (HSG) Moscow Operations Handbook	
JSC 36485	12A Assembly Operations Handbook Example	
JSC Form 234	JSC Screening Request/Approval Form	
JSC Form 237	Computer Access Request Form	
JSC Form 290	JSC Shipping Information	
JSC Form 1735	Pro Forma Invoice Example	
MIL STD-882	General Requirements for System Safety Program for Systems and Associated Subsystems and Equipment	

NNJ04AA02C**(SECTION J-1 Appendix C) Mission Integration Contract****6 of 9****MISSION INTEGRATION CONTRACT REFERENCE DOCUMENTS (CON'T)**

Document Number/Identifier	Document Title	Managed by MIC
NASA Form 531	Name Check Request Form	
No Number	Astronaut Language Training Curriculum	
No Number	Cargo Category Allocation/ Resupply Table (CCART) Example	√
No Number	Center-wide Language Training Curriculum	
No Number	Chit 101 Briefing for IMS Personnel	
No Number	Chits for Real-Time Briefing for IMC Personnel	
No Number	Configuration Status Management Operations System (COSMOS) Requirements	
No Number	Current Stage Requirements Document (CSRD) Example	√
No Number	English as a Second Language Curriculum	
No Number	Export Control Examples	
No Number	IMC 101 Training Presentation	
No Number	Increment Definitions Requirements Plan (IDRP) for Planning Period 4 Example	
No Number	Increment Station Tactical Consumable Planning Example in Power Point	
No Number	Inter-Governmental Agreement for ISS	
No Number	International Space Station Risk Management: Presentation	
No Number	ISS Ham Radio BME Training	
No Number	ISS Ham Radio Cue Card	
No Number	ISS Ham Radio Technical Team Meeting Agenda Example	
No Number	ISS Ham Radio Training Increment 7 Example	
No Number	Integrated Risk Management Application (IRMA) Help Files and Training Guide	
No Number	Integrated Risk Management Application Quick Reference Sheet	
No Number	ISS Stowage Volumetric Assessment Example	
No Number	JSC Language Education Center	
No Number	JSC Language Education Center Reference Documentation List	√
No Number	JSC Standard Load Configuration	
No Number	Manifest Request Processing Training Manual	√
No Number	Manifest Request Processing Users Guide	√
No Number	MIDAS Anonymous WEB Page Information Guide	√
No Number	MIDAS Capabilities and Targeted Upgrades	
No Number	MIDAS Parts Catalog Training Guide	√
No Number	MOD Operations Baseline Example	

NNJ04AA02C**(SECTION J-1 Appendix C) Mission Integration Contract****7 of 9****MISSION INTEGRATION CONTRACT REFERENCE DOCUMENTS (CON'T)**

Document Number/Identifier	Document Title	Managed by MIC
No Number	MOD Planning Products Example; Increment 6 On-Orbit Operations Summary	
No Number	MOD Planning Products Example; ISS-6 Short Term Plan	
No Number	MOD Planning Products Example; Planning Product Change Request (PPCR)	
No Number	MR Report (On-Orbit Stowage Example)	
No Number	MRTS Loader File Description	√
No Number	MRTS Sample Loader File Example	
No Number	On-Orbit Stowage Impact Report Spreadsheet Example	
No Number	Plug-In Plan Website	√
No Number	Post-flight Crew Schedules Example	
No Number	Program Integration and Control Contract Resource Reports Example	
No Number	Sample Traveler Matrix	
No Number	Team Schedules Example; 30-day look ahead	
No Number	Time-Critical Ground Handling Requirements (TGHR) Example	
No Number	Topologies Example: ULFI IVC Assessment- Power Point Charts	
No Number	Web-based Waste Management Hardware Catalog Home Page	√
No Number	Web-based Waste Management Hardware Catalog Example	
No Number	Web-based Housekeeping Hardware Catalog Home Page	√
No Number	Web-based Housekeeping Hardware Catalog Example	
No Number	Web Site for Information Related to JSC Policy on the Registration of Web Sites	
No Number	Web Site for Information Related to Section 508 Standards for Electronic and Information Technology	
NPD 8700.1	NASA Policy for Safety and Mission Success	
NPG 8000.4	Risk Management Procedures and Guidelines	
NSTS 07700, Vol XIV	Space Shuttle System Payload Accommodations	
NSTS 08171	Operations and Maintenance Requirements and Specifications Document (OMRSD), File 1, File 2 Volume II, File X Volumes 1-4	
NSTS 12820 Vol B	ISS Generic Operational Flight Rules Volume B Examples	
NSTS 17462-XX	Flight Requirements Document Blank Book	
NSTS 21000-IDD-ISS	Shuttle Orbiter/ISS Interface Control Document	
NSTS 21000-IDD-MDK	Shuttle/Payload Interface Definition Document for Middeck Accommodations	
NSTS 21458	Standard Integration Agreement for SSP/ISSP	

NNJ04AA02C**(SECTION J-1 Appendix C) Mission Integration Contract****8 of 9****MISSION INTEGRATION CONTRACT REFERENCE DOCUMENTS (CON'T)**

Document Number/Identifier	Document Title	Managed by MIC
OMB Circular A-11	Preparation, Submission and Execution of the Budget	
OMB Circular A130, Appendix III	Management of Federal Information Resources, Appendix III	
OP-01	Assembly and Operations Support Plan Example (SSP 50075 Book 3)	
OSHA Reg 29 CFR 1910.119, Appendix A	Process safety management of highly hazardous chemicals	
OSHA Reg 29 CFR 1910.120	Hazardous waste operations and emergency response	
OSHA Reg 29 CFR 1910.1200	Hazardous Communications	
Public Law 100-235	Computer Security Act of 1987	
Public Law 104-13	Paperwork Reduction Act of 1995	
SSP 30233	Space Station Requirements for Materials and Processes	
SSP 41000	System Specification for the International Space Station	
SSP 41160	ESA Segment Specification for Columbus	
SSP 41162	Segment Specification for the United States On-Orbit Segment	
SSP 41163	Russian Segment Specification	
SSP 41164	Italian Mini-Pressurized Logistics Module	
SSP 41165	Segment Specification for the Japanese Experiment Module	
SSP 41167	Mobile Servicing System Segment Specification	
SSP 50128	Specification of Technical Requirements for the FGB, Functional Cargo Block	
SSP 50223	International Space Station Export Control Plan	
SSP 50230	Mission Integration and Operations Office Certification of Flight Readiness Implementation Plan	√
SSP 50231	S&MA Certification of Flight Readiness Implementation Plan	
SSP 50261-02	Generic Groundrules, Requirements, and Constraints Part 2: Execution Planning	
SSP 50273	Segment Specification for the H-II Transfer Vehicle (HTV)	
SSP 50290	Prime Item Specification for Node 2	
SSP 50306	ISS Crew Return Vehicle Performance Requirements	
SSP 50312	NASA/NASDA Joint Specification for Centrifuge Accommodation Module	
SSP 50333	Cupola Segment Specification	
SSP 50439	Automated Transfer Vehicle Specification	

NNJ04AA02C**(SECTION J-1 Appendix C) Mission Integration Contract****9 of 9****MISSION INTEGRATION CONTRACT REFERENCE DOCUMENTS (CON'T)**

Document Number/Identifier	Document Title	Managed by MIC
SSP 50465	Return Manifest Dispositioning Plan Blank Book	
SSP 50465-11A- As Flown-	Return Manifest Dispositioning Plan Flight Specific RMDP Appendices Example	
SSP 50504	ISS Configuration Document	
SSP 50564	ISS Interior Volume Configuration Document	
SSP 54100	Increment Definition and Requirements Document Flight Program	√
SSP 54104	Increment Definition and Requirements Document For Planning Period 4 Example	
SSP 54104-011A	Increment Definition and Requirements Document for Planning Period 4: Annex 1: Manifest Flight 11A, STS 113, Example	
SSP 54104-ANX2	Increment Definition and Requirements Document for Planning Period 4: Annex 2: On-Orbit Maintenance Plan Example	
SSP 54104-ANX3	Increment Definition and Requirements Document for Planning Period 4: Annex 3: Flight 11a and Increment 6 Stage Imagery Requirements Example	
SSP 54104-ANX4	Increment Definition and Requirements Document for Planning Period 4: Annex 4: Medical Operations and Environmental Monitoring Example	
SSP 54104-ANX5/05	Increment Definition and Requirements Document for Planning Period 4: Annex 5: Increment 5 Payload Tactical Plan Example	
SSP 54300	Post Increment Evaluation Report (PIER) Increment 0 Example	
USA 001874	Joint Operations Interface Procedures (JOIP) for Shuttle Payload Flights	

Item	Amount	Location	Gov Furnished Data	Gov Furnished Equipment	Gov Furnished Facility	NASA Tag No.	Misc
Checkpoint		JSC	x			2093477	Firewall software
GBC 5250 Shredmaster	1	JSC		x		1752300	cross cut shredder with integrated cabinet
IT Server (Dell PowerEdge 2450)		JSC	x			44UEF	
Office Space, desks, office systems	up to 130	JSC		x			includes PC, phone, Network connectivity
On-Orbit Manifest Request Tracking Tool	1	JSC					On-Orbit Stowage Tool
Opti-UPS 1400E UPS	1	JSC		x			SPC Battery backup for IT server
Portable Simultaneous Equipment		JSC					9 receivers, 1 transmitter
Vans	2	JSC		x			Gov to provide mainenance and fuel. Contractor responsible for keeping in good operation and clean condition
Audio Duplicator	1	JSC/12		x			
Language Education Center (JLEC)		JSC/12			x		
TV and VCR		JSC/12/172		x		No property #, has circle NASA tag	
TV and VCR		JSC/12/174		x		No property #, has circle NASA tag	
TV and VCR		JSC/12/220		x		No property #, has circle NASA tag	
TV and VCR		JSC/12/222		x		No property #, has circle NASA tag	
TV and VCR		JSC/12/223		x		No property #, has circle NASA tag	
TV and VCR		JSC/12/224		x		No property #, has circle NASA tag	
TV and VCR		JSC/12/225		x		No property #, has circle NASA tag	

Item	Amount	Location	Gov Furnished Data	Gov Furnished Equipment	Gov Furnished Facility	NASA Tag No.	Misc
TV and VCR		JSC/12/254		x		No property #, has circle NASA tag	
Audio Material and Books	Approx 1400	JSC/12/260	x				Complete listing is located in the technical library, JLEC materials
Camera-Recording, Video		JSC/12/260		x		0072248	
Cassette Duplicating System		JSC/12/260		x		1918273	
Computers w/ language learning Software	10	JSC/12/260	x				
Console, Control		JSC/12/260		x		1919528	
Desk, Console		JSC/12/260		x		1919529	
Listening centers	8	JSC/12/260		x			portable cassette players with multiple jacks for teachers to use in classroom setting for listening comprehensive activities
Printer, ADP		JSC/12/260		x		1919860	
Receiving Set, Television		JSC/12/260		x		1298205	
Recorder, Cassette		JSC/12/260		x		1920369	
Recorder, Cassette		JSC/12/260		x		1920376	
Recorder, Video Cassette		JSC/12/260		x		1918453	
Recorder, Video Cassette		JSC/12/260		x		1918454	
Recorder, Video Cassette		JSC/12/260		x		1918455	
Recorder, Video Cassette		JSC/12/260		x		1918456	
Seat Interactive Sony language labs	10	JSC/12/260		x			
Software, English (CD's) Biological Earth and Atmosphere English Pronunciation Rosetta Stone - Level I, II Soyuz CBT Space		JSC/12/260	x				

Item	Amount	Location	Gov Furnished Data	Gov Furnished Equipment	Gov Furnished Facility	NASA Tag No.	Misc
Software, Russian (CD's) 12 Chairs -Part I, II, III A Russian-English Collocation Art and Travel Russian Culture - 4 CD's Children from Russia - Part I, II Dictionary of the Human Body Grammar Pro-Russian Khorosho - Intro to Russian - Unit 1-5 Life on the Atomic River Michael and Svetlana Rosetta Stone Level I Russian Desk Russian Games Russian Now! - Version 5&7 The Master and Margarita Welcome to Divnograd Writing Tools in Russia		JSC/12/260	x				
TV and VCR		JSC/12/260A		x		No property #, has circle NASA tag	
Receiving Set, Television		JSC/12/264		x		G017498	
Printer, ADP		JSC/12/298		x		1919859	
International Travel Database application		JSC/226	x				Oracle Application
MIDAS		JSC/226	x				Oracle Application
Station Tactical Operations Resouce Management Tool	1	JSC/4South	x				Access Application
Office Space, desks, office systems	7	KSC		x			includes PC, phone, Network connectivity
Vans	17	Russia		x			Gov to provide mainenance and fuel. Contractor responsible for keeping in good operation and clean condition
Office Space, desks, office systems	3	Russia -GCTC		x			includes PC, phone, Network connectivity
Office Space, desks, office systems	1	Russia -HSFP-R		x			includes PC, phone, Network connectivity

Item	Amount	Location	Gov Furnished Data	Gov Furnished Equipment	Gov Furnished Facility	NASA Tag No.	Misc
Office Space, desks, office systems	14	Russia - TsUP/MTLO		x			includes PC, phone, Network connectivity
Office Space, desks, office systems	3	Russia - Volga		x			includes PC, phone, Network connectivity
Safety Hazard Data Reports		VMDB	x				Required for Safety Analyses

Mission Integration
SOW-PWBS Map

Uses SSP 50569, Baseline WBS:

PWBS Element	PWBS Title	CAM	MIC
1	MANAGEMENT INTEGRATION and CONTROL		1.0 Mgmt & Integr
1.1 (Title)	Program Mgmt		1.1 Program Mgmt
1.1.1	Program Mgmt and Administrative Staff	OA	1.1.1 Program Mgmt & Admin
1.1.2	Internal/External Program Review Support	OL	1.1.2 Internal / External Prog Rev Support
1.1.3	HQ Initiatives	OA	
1.1.4	Communications & Outreach	OA	
1.2 (Title)	Business Mgmt		1.2 Business Mgmt
1.2.1	Mgmt & Admin	OG	1.2.1 Reserved
1.2.2	Procurement	OG	1.2.2 Reserved
1.2.3	Resources Mgmt	OG	1.2.3 Resources Mgmt
1.2.4	Assessments	OG	1.2.4 Reserved
1.2.5	Program Scheduling	OM	1.2.5 Scheduling
1.2.6	Program Mission Support	OG	
1.2.7	Business Other (AF, MR, Adj.)	OA	
1.2.8	Defense Contr Agcy Suppt	OG	
1.3 (Title)	CM / Data Integration		1.3 CM / Data Integr
1.3.1 (roll-up)	Config Mgmt		1.3.1 Config Mgmt
1.3.1.1	Mgmt and Admin	OL	1.3.1.1 Mgmt & Admin
1.3.1.2	Configuration Status Acct'g & Verification	OL	1.3.1.2 Reserved
1.3.1.3	Config Control/ Change Mgmt	OL	1.3.1.3 Config Control/ Chng Mgmt
1.3.1.4	Data Management	OL	1.3.1.4 Data Mgmt
1.3.1.5	Software Config Mgmt	OL	
1.3.2	Program Data Integration	OL	1.3.2 Prog Data Integr
1.4 (Title)	Program Information Technology (IT)		1.4 Program Info Technology (IT)
1.4.1	Mgmt & Admin	OL	1.4.1 IT Mgmt
1.4.2	System Mgmt & Ops	OL	1.4.2 Software Tool Development and Operations; 4.1.1.3.4 Database Capabilites
1.4.3 (roll-up)	IT Infrastructure		
1.4.3.1 (roll-up)	Agency IT Services		
1.4.3.1.1	Outsource Desktop Inits	OL	
1.4.3.1.2	NACC Support Services	OM	
1.4.3.1.3	NISN Services	OC	
1.4.3.2	JSC IT Services	OL	
1.5 (Title)	Internat'l Integration		1.5 Internat'l Integr
1.5.1	Mgmt & Admin	OI	
1.5.2 (roll-up)	Internat'l Programmatic Integration		
1.5.2.1	Internat'l Policies/ Agrmts/ MOUs/ Barbers & Offsets	OI	
1.5.2.2 (roll-up)	NASA Liaisons to IP's		
1.5.2.2.1	NASA Liaisons to ESA, CSA, ASI, IMPE, NASDA	OI	
1.5.2.2.2	NASA Mgmt Team Russ	OI	
1.5.2.3	Russ Goods & Services	OI	
1.5.2.4 (roll-up)	Russian Enabling		
1.5.2.4.1	Russ Lang & Logistics	OI	1.5.1 Russ Language & Logistics Services; 1.5.1.1 Translation; 1.5.1.2 Interpretation; 1.5.1.3 Russian & English Language Training; 1.5.1.4 Logistics

Mission Integration
SOW-PWBS Map

Uses SSP 50569, Baseline WBS:

PWBS Element	PWBS Title	CAM	MIC
1.5.2.4.2	RSA Cosmonaut Rep to NASA	OI	
1.5.2.4.3	NASA Astronaut Rep to Russia (Gagarin Cosmonaut Trng Center)	OI	
1.5.2.5	Export Control	OL	1.5.2.5 Export Mgmt
1.5.3	IP Elements Integration Mgmt	OM	
1.5.4	International Operations	OC	1.5.2 Int'l Msn Integr; 1.5.2.1 Int'l Shipping Coord.; 1.5.2.2 Reserved; 1.5.2.3 ISS Ham Radio Proj.; 1.5.2.4 Joint Cargo Cert Team
1.6 (Title)	Human Space Flt Collaboration		
1.6.1	Mgmt & Admin	OA	
1.6.2	Capability Upgrades	OA	
1.6.3	Space Act Agrmts	OA	1.6 Human Space Flight Collaboration
1.6.4	Space Flight Participants	OA	
1.6.5	Outreach & Education	OA	
1.6.6	Reserved	OA	
1.7 (Title)	Strategic Initiative		
1.7.1	Program Process Re-eng	OA	
1.7.2	Knowledge-Based Tools	OA	
1.7.3	P3I Planning	OA	
1.7.4	Special Studies/Tasks	OA	
2	ISS SYSTEMS ENG, ANALYSIS, and INTEGRATION		2.0 Reserved
2.1	Mgmt & Admin	OM	
2.2 (roll-up)	Systs Analysis & Integration		
2.2.1	Rqmts & Interfaces	OM	
2.2.2	System Performance Analysis and Integration	OM	
2.2.3	Assy & Config Definition / Analysis	OM	
2.2.4	Drawing Integration	OM	
2.2.5	Shuttle/Station Integration	OM	
3	SPACECRAFT		3.0 Reserved
3.1 (roll-up)	ISS Spacecraft Mgmt		
3.1.1	Vehicle Mgmt & Admin	OB	
3.1.2	Avionics and Software Mgmt and Admin.	OD	
3.1.3	Bus Other (AF, MR, Adj.)	OA	
3.2 (roll-up)	ISS Elements		
3.2.1 (roll-up)	Element Development		
3.2.1.1	Trusses	OB	
3.2.1.2	Pressurized Elements	OB	
3.2.1.3	Pressurized Carriers and Support Equipment	OB	
3.2.1.4	Unpressurized Carriers and Support Equipment	OM	
3.2.1.5	Vehicle Test & Verif (T&V)	OB	

Mission Integration
SOW-PWBS Map
Uses SSP 50569, Baseline WBS:

PWBS Element	PWBS Title	CAM	MIC
3.2.1.6	Launch Site T&V	KSC	
3.2.1.7	Reserved	OM	
3.2.1.8 (roll-up)	Node 3 Dvlpmt		
3.2.1.8.1	Node 3 H/W	OB	
3.2.1.8.2	Reserved	OD	
3.2.1.8.3	Node 3 Design & Integr	OB	
3.2.1.8.4	Node 3 T&V	OB	
3.2.2 (roll-up)	Element Sustaining		
3.2.2.1	Trusses & Press Elems	OB	
3.2.2.2	Pressurized Carriers and Support Equipment	OB	
3.2.2.3	Unpressurized Carriers and Support Equipment	OM	
3.3 (Title)	Flight Systems		
3.3.1 (roll-up)	Elec Power Sys (EPS)		
3.3.1.1	EPS Dvlpmt and Testing	OB	
3.3.1.2	EPS Sustaining	OB	
3.3.2 (roll-up)	Therm Control Syst (TCS)		
3.3.2.1	TCS Dvlpmt and Testing	OB	
3.3.2.2	TCS Sustaining	OB	
3.3.3 (roll-up)	Env. Control & Life Supp Sys (ECLSS)		
3.3.3.1	ECLSS Dvlpmt & Testing	OB	
3.3.3.2	ECLSS Sustaining	OB	
3.3.3.3 (roll-up)	Regenerative ECLSS	OB	
3.3.3.3.1	Regen ECLSS Flt Exper	OB	
3.3.3.3.2	Water Recovery Flt Sys	OB	
3.3.3.3.3	O2 Generation Flt Sys	OB	
3.3.4 (roll-up)	Struc & Mech (S&M)		
3.3.4.1	S&M Dvlpmt & Testing	OB	
3.3.4.2	S&M Sustaining	OB	
3.3.5	Propulsion	OB	
3.3.6 (roll-up)	Robotics		
3.3.6.1	Robo Dvlpmt&Testing	OM	
3.3.6.2	Robotics Sustaining	OM	
3.3.7 (roll-up)	Specialty Engineering		
3.3.7.1	Parts	OB	
3.3.7.2	Mat'ls & Proc (M&P)	OB	
3.3.7.3	Environments	OM	
3.3.7.4	Electromag Effects (EME)	OD	
3.3.8	Mission Evaluation		
3.3.8.1	MER	OB	
3.3.8.2	Reserved	OB	
3.3.8.3	Chief Engineers	OB	
3.4 (Title)	Avionics Systems		

Uses SSP 50569, Baseline WBS:

PWBS Element	PWBS Title	CAM	MIC
3.4.1 (roll-up)	Guidance, Navig & Control (GN&C) Systems		
3.4.1.1	GNC Dvlpmnt & Testing	OD	
3.4.1.2	GNC Sustaining	OD	
3.4.2 (roll-up)	Cmd & Track (C&T) Systs		
3.4.2.1	C&T Dvlpmnt & Testing	OD	
3.4.2.2	C&T Sustaining	OD	
3.4.3 (roll-up)	Command & Data Handling (C&DH) Systs		
3.4.3.1	C&DH Dvlpmnt & Testing	OD	
3.4.3.2	C&DH Sustaining	OD	
3.4.4 (roll-up)	Local Area Nets (LANs)		
3.4.4.1	LAN Dvlpmnt & Testing	OD	
3.4.4.2	LAN Sustaining	OD	
3.4.5 (roll-up)	Laptops		
3.4.5.1	Laptop Dvlpmnt & Testing	OD	
3.4.5.2	Laptop Sustaining	OD	
3.5 (Title)	Crew Systems		
3.5.1 (roll-up)	Flt Crew Systems (FCS)		
3.5.1.1	FCS Dvlpmnt & Support	OB	
3.5.1.2	FCS Sustaining	OB	
3.5.2 (roll-up)	CHeCS		
3.5.2.1	CHeCS Dvlpmnt & Supp	OB	
3.5.2.2	CHeCS Sustaining	OB	
3.6 (Title)	EVA Systems		
3.6.1	EMU and H/W	XA	
3.6.2	EVA Facils	XA	
3.6.3	EVA Ops	XA	
3.6.4	EVA - SR&QA	XA	
3.7 (Title)	Flight Software		
3.7.1	Avionics-S/W Integr	OD	
3.7.2	S/W Sys Engineering	OD	
3.7.3 (roll-up)	Software Production		
3.7.3.1	Timeliner	OD	
3.7.3.2	Cmd Control S/W (CCS)	OD	
3.7.3.3	Node Control S/W (NCS)	OD	
3.7.3.4	Lab Systs / Airlock	OD	
3.7.3.5	Node 2	OD	
3.7.3.6	HUB Control S/W (HCS)	OD	
3.7.3.7	Node 3 S/W	OD	
3.7.3.8	Internal Systems	OD	
3.7.3.9	P/L Exec Proc (PEP)	OD	
3.7.3.10	PV Controller Application	OD	
3.7.3.11	Pwr Mgmt Control Applic	OD	
3.7.3.12	GN&C	OD	
3.7.3.13	S0 Truss	OD	
3.7.3.14	External Systems	OD	
3.7.3.15	S1/P1	OD	
3.7.3.16	SPTR	OD	
3.7.3.17	S3/P3	OD	
3.7.3.18	PCS S/W	OD	
3.7.3.19	Station Supp Computer	OD	
3.7.4	H/W-S/W Integr (HSI)	OD	
3.7.5 (roll-up)	SDIL		
3.7.5.1	Ops	OD	

Uses SSP 50569, Baseline WBS:

PWBS Element	PWBS Title	CAM	MIC
3.7.5.2	Systs Engineering	OD	
3.7.5.3 (roll-up)	ISIL Completion		
3.7.5.3.1	Hardware	OD	
3.7.5.3.2	Engineering	OD	
3.7.5.4	Facilities	OD	
3.7.6	Indep Valid & Verif (IV&V)	OD	
3.8 (Title)	Logistics & Maint		
3.8.1 (roll-up)	Integrated H/W L&M		
3.8.1.1	Logistics Dvlpmnt Data Products	OB	
3.8.1.2	Prime Spares Production	OB	
3.8.1.3	Post-Production Support	OB	
3.8.1.4 (roll-up)	Transportation & W/H'ing		
3.8.1.4.1	GBLS	OB	
3.8.1.4.2	Guppy & Other Logistics Transports	OB	
3.8.1.4.3	GFM	OB	
3.8.2 (roll-up)	GFE H/W L&M		
3.8.2.1	EVA Class 1 & 3 Suits / Tools	OB	
3.8.2.2	Crew Provisioning Support	OB	
3.8.2.3	CHeCS L&M	OB	
3.8.2.4 (roll-up)	Other Integrated GFE L&M		
3.8.2.4.1	SPCE Spares & Repairs	OB	
3.8.2.4.2	Regen ECLSS Spares	OB	
3.8.2.4.3	Other GFE L&M	OB	
3.8.2.5	Reserved	OB	
3.8.2.6	Decals, Placards, & Graphics	OB	
3.8.3	Launch Site Logistics Flight Support	KSC	
3.9 (Title)	Crew Transfer Vehs		
3.9.1	CRV	OA	
3.9.2	Crew Return	OA	
4	OPERATIONS		4.0 Operations
4.1 (Title)	Mission Integration		4.1 Msn Integr (Title)
4.1.1 (roll-up)+B89	Mgmt & Admin		
4.1.1.1	General Mgmt	OC	
4.1.1.2 (roll-up)	Ops Business Mgmt	OC	
4.1.1.2.1	Pressurized Carrier Business Mgmt	OC	
4.1.1.2.2	Unpressurized Carrier Business Mgmt	OM	
4.1.1.2.3	Other Mgmt	OC	
4.1.1.3	Reserved	OC	
4.1.1.4	Business Other (AF, MR, Adj.)	OA	
4.1.2 (roll-up)	Mission Rqmts and Planning		4.1.1 Mission Rqmts & Planning (roll-up)
4.1.2.1 (roll-up)	Increment / Stage Integr		4.1.1.1 Increm / Stage Integr (roll-up)

Uses SSP 50569, Baseline WBS:

PWBS Element	PWBS Title	CAM	MIC
4.1.2.1.1	Increment Rqmts & Planning	OC	4.1.1.1.1 IDRP/IDRD Documentation Tasks; 4.1.1.1.2 GGR&C; 4.1.1.1.3 Station Dvlpmnt Test Objs (SDTOs); 4.1.1.1.5 Increment Engineer (IE); 4.1.1.1.8 Administration & Schedule Support; 4.1.1.1.9 Station Tact. Incr. Cons.& Res. Mgmt.
4.1.2.1.2	Mission Support	OC	4.1.1.1.4 Increment Resources Tracking & Rpts; 4.1.1.1.6 Console Ops Support Documen; 4.1.1.1.7 IMC Admin
4.1.2.2 (roll-up)	Launch Pkg (LP) Integr		4.1.1.2 LP Integr (roll-up)
4.1.2.2.1	Launch Pkg Mgmt and Coordin	OC	4.1.1.2.1 LP Engineer (LPE) Tasks; 4.1.1.2.2 Joint Ops Veh Integr Rqmts Dvlpmnt; 4.1.1.2.3 LPE Launch Veh Integr Rqmts Dvlpmnt; 4.1.1.2.4 Launch Site Integr/ Deintegration Activs.; 4.1.1.2.6 Flt. Station Tact. Res. Mgmt; 4.1.1.2.7 CoFR; 4.1.1.2.8 LP Support Functions.
4.1.2.2.2	Real-Time and Post-Mission Support	OC	4.1.1.2.5 LPE R-T & Post-Msn Supp Tasks
4.1.2.3	Manifest	OC	4.1.1.3 Manifest; 4.1.1.3.1 Manifest Process Support; 4.1.1.3.2 Flt-Specific Manifests; 4.1.1.3.3 Tac / Incrm Manifest; 4.1.1.3.5 Sys Admin; 4.1.1.3.6 Parts Data Maint.
4.1.2.4 (roll-up)	Inventory Mgmt		4.1.1.4 IMS
4.1.2.4.1	Rqmts and Planning	OC	4.1.1.4.1 IMS Processes
4.1.2.4.2	Tools Dvlpmnt & Mainten	OC	
4.1.2.5 (roll-up)	Crew Provisioning		4.1.1.5 Crew Provis'g/Mission Habitability
4.1.2.5.1	Rqmts & Planning	OC	4.1.1.5.1 Crew Provis'g Mgmt; 4.1.1.5.2 Waste Mgmt; 4.1.1.5.3 HK Integ
4.1.2.5.2	Provisioning Procurement	OC	
4.1.2.6 (roll-up)	Imagery		4.1.1.6 Imagery
4.1.2.6.1	Imagery Rqmts & Planning	OC	4.1.1.6.1 Imagery Processes; 4.1.1.6.2 Pre-Flight Imagery; 4.1.1.6.3 On-orbit Imagery; 4.1.1.6.4 Special Rqmts & Technology Advancmt

Uses SSP 50569, Baseline WBS:

PWBS Element	PWBS Title	CAM	MIC
4.1.2.6.2	R-T Downlink & Imagery Processing & Distribution	OC	
4.1.2.6.3	Imagery Analysis and Eng.	OC	
4.1.2.6.4	Non-launch Site Imagery	OC	
4.1.2.6.5	Launch Site Imagery	KSC	
4.1.2.7 (roll-up)	Program Ops Integration		4.1.1.7 Prog Ops Integr
4.1.2.7.1	Program Ops Integr Rqmts & Plans	OC	
4.1.2.7.2	Prime Mission Support	OC	
4.1.2.8 (rollup)	Flt Crew Ops Integr		4.1.1.8 Reserved
4.1.2.8.1	Crew Integr Activs	OC	
4.1.2.8.2	Exped. Interpersonal Trng	OC	
4.1.2.8.3	IMPASS / Photo Support	OC	
4.1.2.9	On-Orbit Stowage Capabilities and Configuration	OC	4.1.1.9 On-Orbit Stow Capabils & Config; 4.1.1.9.1 Internal Stow Capabils & Config; 4.1.1.9.2 Tactical Internal & External Vol. Conf. IVC; 4.1.1.9.3 Plug-In Plan
4.1.3 (roll-up)	Pressurized Cargo Integration		
4.1.3.1	Cargo Integration & Analysis	OC	
4.1.3.2	Stowage Integration	OC	
4.1.3.3	Cargo Mission Rqmts & Planning	OC	
4.1.3.4	Physical Processing	OC	
4.1.3.5	Mission Support	OM	
4.1.4 (roll-up)	Unpressurized Cargo Integration		
4.1.4.1	Cargo Integration & Analysis	OM	
4.1.4.2	On-Orbit Stowage	OM	
4.1.4.3	Cargo Mission Rqmts & Planning	OM	
4.1.4.4	Physical Processing	OM	
4.1.4.5	Mission Support	OM	
4.2	Medical Support		4.2 Reserved
4.2.1	Medical Ops	OC	
4.2.2	Medical Support Services	OC	
4.2.3	Medical Lab Ops Support	OC	
4.2.4	Radiation Ops	OC	
4.2.5	Life Sci Mission Integr	OC	
4.3	Mission Ops		

Uses SSP 50569, Baseline WBS:

PWBS Element	PWBS Title	CAM	MIC
4.3.1	Mgmt & Admin	DA	
4.3.2	Mission Facilities		
4.3.2.1	Integr Planning Sys Ops	DA	
4.3.2.2	MCC Ops	DA	
4.3.3 (roll-up)	Training & Eval Facils		
4.3.3.1 (roll-up)	Trng & Eval Facils Dvlpmnt		
4.3.3.1.1	SSTF & PTT Dvlpmnt	DA	
4.3.3.1.2	SVMF ISS Dvlpmnt Supp.	DA	
4.3.3.2 (roll-up)	Trng & Eval Facils Ops		
4.3.3.2.1	SSTF & PTT Ops	DA	
4.3.3.2.2	Other Ops Facils (SVMF Ops Support)	DA	
4.3.3.2.3	MRMDF/DMT Ops	DA	
4.3.4	Flt Ops, Trng, & Msn Prep	DA	
4.4	Launch Site Process.		
4.4.1 (roll-up)	Launch Site Ground Systs		
4.4.1.1	Launch Site Facilities	KSC	
4.4.1.2	Launch Site GSE	KSC	
4.4.1.3	Launch Site Ground Processing (TCMS)	KSC	
4.4.2 (roll-up)	Launch Support		
4.4.2.1 (roll-up)	Launch Site Mission Direct		
4.4.2.1.1	R&R Mission Processing	KSC	
4.4.2.1.2	Assy & Internat'l (A&I) Msn Processing-Host Role	KSC	
4.4.2.2	Launch Site Non-Mission Direct	KSC	
4.4.3	Launch Site Mgmt & Adm	KSC	
4.4.4	Launch Site CM	KSC	
4.4.5	Launch Site Outsource Desktop Initiatives	KSC	
4.4.6	Launch Site Logistics Ground Support	KSC	
4.4.7	Launch Site S&MA	KSC	
5	RESEARCH CAPABILITY		5.0 Reserved
5.7	Multi-User Sys Supp	OZ	
5.7.1	Program Mgmt	OZ	
5.7.2	Mission Integration	OZ	
5.7.3	P/L Eng. Integration	OZ	
5.7.4	S/W Eng & Flt Dvlpmnt	OZ	
5.7.5	P/L Systems Support	OZ	
5.7.6	Consolidated Spares	OZ	
5.7.7	P/L Ops Integration	OZ	
5.7.8	POIC/PDSS	OZ	
5.7.9	P/L Planning System	OZ	
5.7.10	NISN	OZ	
5.7.11	KSC P/L Processing	OZ	
5.7.12	Hanger L and SERPL	OZ	
5.7.13	Freezer Dvlpmnt & Integr	OZ	
5.7.14	P/L Integr Support	OZ	

Mission Integration
SOW-PWBS Map

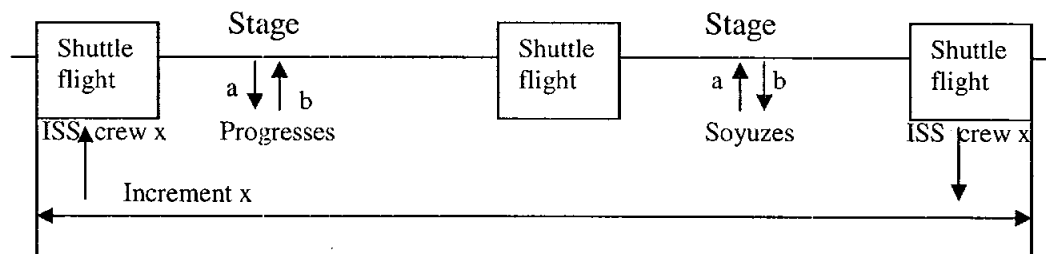
Uses SSP 50569, Baseline WBS:

PWBS Element	PWBS Title	CAM	MIC
6	S&MA		6.0 S&MA
6.1	Mgmt & Admin	OE	6.1 S&MA Mgmt (Title); 6.1.1 MA/RM Plan; 6.1.2 AS9100; 6.1.3 Audit/ Surveill; 6.1.4 Mishap Investig'g & Reporting; 6.1.5 Safety & Health; 6.1.6 Lessons Learned
6.2	S&MA Integration	OE	6.2 S&MA Integration (roll-up); 6.2.1 Change Rev Recomm; 6.2.2 CoFR
6.3	Risk Management	OE	6.3 Program Risk; 6.3.1 Risk Mgmt; 6.3.2 Reserved
6.4	Safety	OE	6.4 ISS Safety Progr (roll-up); 6.4.1 ISS Safety Assessment; 6.4.2 Safety Rqmt Verif
6.5	Reliability and Maintainability (R&M)	OE	6.5 Reserved
6.6	Quality Assurance (QA)	OE	6.6 Reserved
6.7	S&MA Operations	OE	6.7 Reserved

APPENDIX F: Description of Increments and Planning Periods

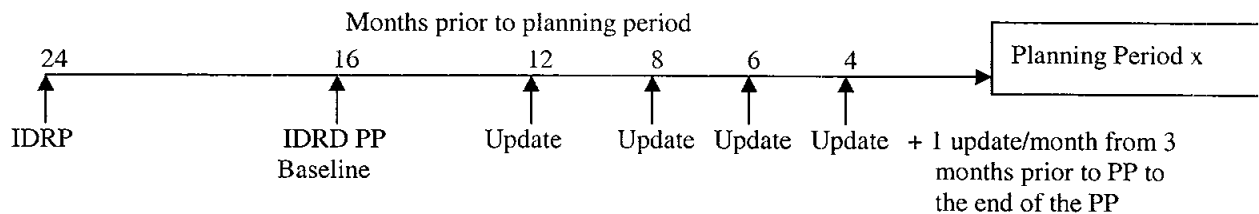
The following product templates and increment descriptions are provided for purposes of clarification. Actual contract obligations are defined in section 4.1.1.1 of the SOW.

An increment is the time period that an ISS crew is onboard ISS and is bounded by the flight that delivers the crew to ISS and the flight that returns them to Earth at the end of their ISS stay. These flights may be Shuttle or Soyuz transportation vehicles. An example of an increment is illustrated below.

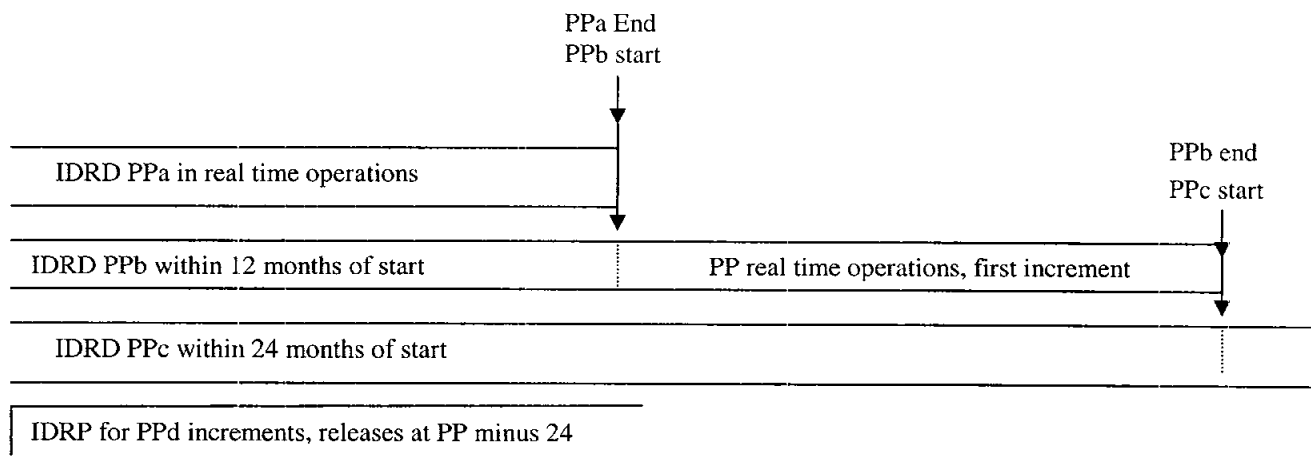


A Planning Period consists of one or more (usually 3) increments that occur in an approximate 1 year time period. The duration of the planning period and the flights that define the increments and planning periods are strategically defined in the MIM, tactically defined in the IDRD FP, and continued in the IDRD PP.

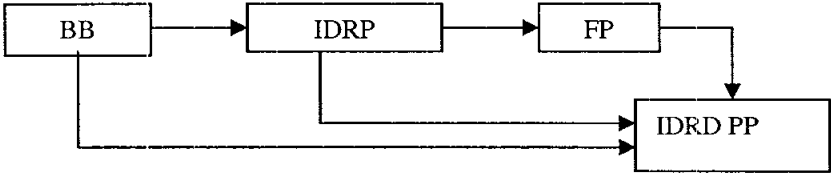
The generic, preplanning period, schedule template for an increment specific IDRP and IDRD PP (prior to the planning period) is presented below. Actual contract obligations are defined in SSP 50489 and section 4.1.1.1.1.



An overlay of multiple planning period schedules is provided below to demonstrate the usual number of IDRD PPs (three) and IDRP (one) in process at any given time



The relationship between the IDR D BB, IDR D FP, IDR P, and IDR D PP is presented below.



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(SECTION J-1 Appendix G)

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SECTION J-1 APPENDIX G
Administrative Meeting Support Requirements Example

Meeting Name	Frequency	Schedule Telecon or Meeting (Conf. Room, Telecon, Materials)	Prepare & Send Agendas & Minutes	Maintain POC List, Distribution Lists, and Team calendars Distribute Team Information	Maintain Action Item Lists/ Database	Post Team Information to Team/Office Website	Collect and Prepare Meeting Material, Real-Time Meeting Support	Badging/ Escort Assistance For IPs, Interpreter Request
Requirements Integration Panel	Weekly	x	x	x	x	x	x	
Increment Management Team Meetings	If within 1 year weekly otherwise twice/month	x	x	x	x	x	x	
Flight Program WG	Weekly	x	x	x	x	x	x	
Post Mission	Twice monthly (close to increment ending plus all post increment debriefs)	x	x	x		x		
IDRD Videocon with Russians	Weekly	x	x					
Bilateral/IMultilateral Planning TIM	Quarterly	x	x					x
LPM Team Meetings Current + next 4 flights	Weekly	x	x	x	x	x	x	
Flight Payload Planning WGs Current + next 4 flights	Quarterly	x	x					
Level II/III Schedule TIMs Current + next 4 flights	Quarterly	x	x		x			
Other LPM TIMs as scheduled	Quarterly	x	x		x			
Cargo Planning and Imagery Staff Meeting	Monthly	x		x		x		
Manifest WG	Weekly	x	x	x	x	x	X	
Additional Tasks			Input MWG Status of MR's to				Materials required from MIDAS	

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Meeting Name	Frequency	Schedule Telecon or Meeting (Conf. Room, Telecon, Materials)	Prepare & Send Agendas & Minutes	Maintain POC List, Distribution Lists, and Team calendars Distribute Team Information	Maintain Action Item Lists/ Database	Post Team Information to Team/Office Website	Collect and Prepare Meeting Material, Real-Time Meeting Support	Badging/ Escort Assistance For IPs, Interpreter Request
			MIDAS					
Multi-Lateral MWG	Weekly Telecon	x	x	x	x			x
Manifest TIM	Quarterly	x	x					x
Crew Provisioning WG	Bi-Weekly	x	x	x	x	x	x	
Imagery WG	Monthly	x	x	x	x	x	x	
Multi-Lateral and Bilateral IWG	Monthly Telecon Quarterly Face-to - Face	x	x	x	x	x	x	X (Quarterly)
Multi-Lateral Stowage Integration WG	Weekly	x	x	x	x	x		x
Multi-lateral Stowage Integration TIM	2 to 3 times annually	x	x		x			x
Russian Elements Team O Videocon	Weekly	x	x	x	x	x		x
Russian Cargo Integration WG	Weekly	x	x	x	x	x		
Russian Vehicles Telecon	Weekly	x	x	x	x	x		x
Waste/Housekeeping Management	Monthly	x	x	x	x	x		
ATV Cargo Integration Team (ACIT)	Monthly	x	x	x	x		x	
Bilateral Inventory Management System WG (BIMSWG)	Quarterly	x	x	x	x			x
IP MIO Tagups (CSA, NASDA, and ESA)	Monthly	x	x	x	x	x		
Multilateral Housekeeping Integration WG	Twice-annually face-to-face	x	x	x	x			x
Multilateral Trash/Waste Integration Group	Twice-annually face-to-face	x	x	x	x			x

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Mission Integration Contract**3 of 3**

Meeting Name	Frequency	Schedule Telecon or Meeting (Conf. Room, Telecon, Materials)	Prepare & Send Agendas & Minutes	Maintain POC List, Distribution Lists, and Team calendars Distribute Team Information	Maintain Action Item Lists/ Database	Post Team Information to Team/Office Website	Collect and Prepare Meeting Material, Real- Time Meeting Support	Badging/ Escort Assistance For IPs, Interpreter Request
Requirements Integration Team (RITT)		x						
SDTO Telecon	Twice a month	x	x	x	x			
MITT	Monthly	x		x		x		
Consumable Planning	Weekly	x	x	x		x		

Mission Integration Contract Russian Services

Meeting Support Request Form (MSRF)

Please complete the form below giving as much detail as possible

Every meeting is unique in the way that it is organized, setup, and handled. These and other various factors will determine what support would be best suited for your meeting. Information listed below will help you determine what type of support best fits your meeting support needs.

Definition of an Interpreter – Someone that interprets conversation – Oral, not written

Definition of Consecutive Interpretation – The speaker pauses and waits for the interpreter to interpret. This type of interpreting is what is normally used for face-to-face meetings such as a mini-TIM.

Definition of Simultaneous Interpretation – The interpreter sits in a separate room and interprets without the speaker pausing. Special simultaneous equipment is required for this type of interpreting as well as special configuration of the meeting room. Simultaneous is mainly used during multilateral meetings or very high-level management meetings. This mode requires multiple interpreters.

Definition of a Translator – Someone that translate documents – Written, not Oral. If you feel that a translator is necessary to be present at the meeting location please give reasons – as much detail as possible – and indicate whether you will require translation into English only, into Russian only, or both. **To have a translator at a meeting requires NASA Management / MIC COTR or designee approval.**

MIC Logistics Coordination Support at a Meeting – This support is mainly used when there are a large number of participants and/or a large number of splinter groups and/or a large number of documents to be translated during a meeting. **To have a logistics coordinator at a meeting requires NASA Management / MIC COTR or designee approval.**

Conference Rooms – After work hour conference rooms are used when there are several groups meeting in Moscow so that they can have a place at the end of the work day at the hotel to tag up. This is normally only done for high-level management meetings such as GDR, JPR, etc. **To have a remote conference room reserved requires NASA Management / MIC COTR or designee approval.**

Please include a copy of the agenda for your meeting (**mandatory**) along with any presentations that will be given, documents to be discussed, or other reference material that would be helpful for the interpreters to study prior to your meetings. Providing such materials in advance will allow the interpreter(s) to be better acquainted with the subject matter and terminology, and as a result will improve the quality of support you can expect at your meeting. In addition, please make a copy for the interpreter(s) when distributing any materials during the meeting itself.

Mission Integration Contract Russian Services

Meeting Support Request Form (MSRF)

Please complete the form below giving as much detail as possible

Name of Meeting – Description of work / task (provide as much detail as possible)	
Will there be any Export Control topics discussed at the meeting?	No
Meeting Dates	
Meeting Location (Country, city, work site, building #, room #, etc.)	
Phone number at the meeting location	
Meeting start time	
Lunch break (give start time & end time)	
Meeting end time	
Trip / Meeting Lead	
Trip / Meeting Lead's work phone #	
Trip / Meeting Lead's work fax #	
Trip / Meeting Lead's pager #	
Trip / Meeting Lead's cell phone #	
Trip / Meeting Lead's home #	
NASA Letter of Invitation / Trip #	
Suggested number of Interpreters	
What type of interpretation will be needed? (Simultaneous or Consecutive)	N/A
Suggested number of Translators	
Justification if Translators are requested (Mandatory for approval)	
Will you require a logistics person at your meeting? (Requires NASA mgmt/MIC COTR or designee approval)	No
Will you require MIC to reserve a conference room?	No
If so, how many people should the room be able to accommodate?	
What days will you need the conference room?	
What time will you need the conference room? (Please give start and end times)	
Do you have a weekly standing telecon that needs to be canceled during the dates of your meeting?	No

Mission Integration Contract Russian Services Meeting Support Request Form (MSRF)

Please complete the form below giving as much detail as possible

Will you require MIC to provide transportation?	Yes
If so, how many people will transportation be needed for?	
What time will you require pick up in the morning to go to the meeting?	
Will you require MIC transportation during lunch?	No
If so, what time will we need to pick up the group for lunch? (Requires NASA mgmt/MIC COTR or designee approval)	
What time will we need to have the group back to work after lunch?	
What time will we need to pick up the group at the end of the day to take them back to the hotel?	
For meetings at NASA/JSC only The MIC will automatically request Buildings 1, 4N, 4S, & 9. Please indicate any other buildings that you will require the Russian Delegation to be badged for.	

If you have any additional comments and or instructions please list them here:

Mission Integration Contract Russian Services Service Evaluation Form (SEF)

Date: _____
Event: _____
WBS Number: _____
Type of Work: _____
Document: _____
MIC Representative: _____
Evaluator: _____
Deliver to NASA
COTR or Designee: _____

Excellent ☐ Very Good ☐ Good ☐ Satisfactory ☐ Unsatisfactory ☐

Excellent -	Of exceptional merit; exemplary performance in a timely, efficient, and economical manner; very minor (if any) deficiencies with no adverse effect on overall performance.
Very Good -	Very effective performance, fully responsive to contract requirements accomplished in a timely, efficient, and economical manner for the most part. Only minor deficiencies.
Good -	Effective performance; fully responsive to contract requirements; reportable deficiencies, but with little identifiable effect on overall performance.
Satisfactory -	Meets or slightly exceeds minimum acceptable standards; adequate results. Reportable deficiencies with identifiable, but not substantial, effects on overall performance.
Unsatisfactory -	Does not meet minimum acceptable contract standards in one or more areas; remedial action required in one or more areas; deficiencies in one or more areas that adversely affect overall performance.

Comments: _____

**Mission Integration Contract
Russian Services
Translation Request Form (TRF)**

WBS # _____
NASA POC _____ Phone # _____

Request for Written Translation:

Requestor's name, phone, & mail code _____

Title of Document: _____

Number of Pages in Document: _____

Translation Required by (date & time): _____

Is Due Date Flexible? ☐ Yes ☐ No If No, Provide Justification. _____

Additional Details: _____

Additional Distribution Instructions: _____

* Documents are returned electronically in Office 97 (or higher) to the Initiator, the POC, and the requestor. You may request a hard copy below. You may list additional recipients in the "additional distribution instructions" section above.

Check One:

☐ Russian to English

☐ English to Russian*

(*Requires NASA mgmt approval)

Check One:

☐ New

☐ New

☐ Rework # _____

☐ Rework # _____

☐ Safety/Mission Critical

☐ Safety/Mission Critical

Check, if applicable:

☐ Graphics Included

☐ Electronic copy provided by customer?

☐ Return hard (paper) copy?

☐ **Special Processing Required (for English to Russian translation only)**

Rationale/Justification

Management Approval

NASA Office Use Only

Date/Time NASA Received: _____

Date/Time Sent to MIC Contractor: _____

Expected Completion Date: _____

Priority Established: _____

Date/Time Received from MIC Contractor: _____

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(SECTION J-1 Appendix H Form 4a)

Mission Integration Contract

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ISS Resupply Request – Crew Rotation

Office Supplies			
Item	Size / Color	Qty	Priority H, M, L
Adjustable Bungee			
Alligator Clip			
Binder Clip			
Book Clamp			
Book Clip (gold clip)			
Book Tether (12", 24", 36")			
Bite-A-Lite			
Jakstrap			
Mini-Mag light			
Spare Bulb Kit			
Spotlight (Mag light)			
Velcro Cable Strap			
Headphone Cable			
Printer Color Cartridge			
Helmet Bag			
Calculator			
Color Dot Kit			
Aluminum Tape			
Double-Sided Tape			
Gray Tape (1" & 2")			
Masking Tape			
Mounting Squares			
Tape (Color & Scotch)			
Timer			

Office Supplies			
Item	Size / Color	Qty	Priority H, M, L
Leatherman Tool			
Scissors			
Swiss Army Knife			
Utility Knife			
Micro Recorder			
Paper Pad (Green, White, Legal, Metric)			
Black Notebook			
Green Record Book			
Mechanical Pencil			
Colored Pencils			
Highlighter			
Pen, Marker			
Pen, Ballpoint			
Pen, Lumocolor (Blk, Blue, Green, Red)			
Pen, Sharpie			
Post-It Flags			
Post-It Notes (1.5"x2", 3"x3", 3"x5")			
Rubber Bands			
Rubber Eraser			
Sewing Kit			
Velcoin Kit			
Velcro Kit (1" & 2")			
Ziplock Bags (miscellaneous sizes)			
Binder			

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(SECTION J-1 Appendix H Form 4b)

Mission Integration Contract

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ISS Resupply Request – Non-Crew Rotation

Office Supplies			
Item	Size / Color	Qty	Priority H, M, L
Adjustable Bungee			
Alligator Clip			
Binder Clip			
Book Clamp			
Book Clip (gold clip)			
Book Tether (12", 24", 36")			
Bite-A-Lite			
Jakstrap			
Mini-Mag light			
Spare Bulb Kit			
Spotlight (Mag light)			
Velcro Cable Strap			
Headphone Cable			
Printer Color Cartridge			
Helmet Bag			
Calculator			
Color Dot Kit			
Aluminum Tape			
Double-Sided Tape			
Gray Tape (1" & 2")			
Masking Tape			
Mounting Squares			

Office Supplies			
Item	Size / Color	Qty	Priority H, M, L
Leatherman Tool			
Scissors			
Swiss Army Knife			
Utility Knife			
Micro Recorder			
Paper Pad (Green, White, Legal, Metric)			
Black Notebook			
Green Record Book			
Mechanical Pencil			
Colored Pencils			
Highlighter			
Pen, Marker			
Pen, Ballpoint			
Pen, Lumocolor (Blk, Blue, Green, Red)			
Pen, Sharpie			
Post-It Flags			
Post-It Notes (1.5"x2", 3"x3", 3"x5")			
Rubber Bands			
Rubber Eraser			
Sewing Kit			
Velcoin Kit			
Velcro Kit (1" & 2")			

(SECTION J-1 Appendix H Form 4b)

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(SECTION J-1 Appendix H Form 4b)

Mission Integration Contract

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Washcloths			
Wet Wash Package			
Toilet Paper			
Dry Wipes			
Food			
Item		Qty	Priority H, M, L

Clothing			
Item	Size	Qty	Priority H, M, L
Athletic Headband			
Athletic Shorts			
Handkerchiefs			
Dark Blue T-Shirts			
White T-shirts			
Underwear, Boxers			
Underwear, Briefs			
Crew Socks			
Tube Socks			
Polartec Socks			
Slipper Socks			
Shorts			
Trousers			

Comments / Instructions or Additional Requests:

ARRIVAL NOTIFICATION FORM (ANF)

ANF (Rev. F – 8/1/00)

Travelers must complete and fax a copy of the "Arrival Notification Form (ANF)" and include a copy of his or her trip itinerary to the Mission Integration Contract Russian Services Contractor at _____. This information is essential in order to ensure safety of travelers and ground transportation requirements while in Russia. In the event travel plans are changed or delayed, it is imperative travelers contact the Mission Integration Contract Russian Services Contractor immediately at _____ or after hours at _____.

Last Name, First Name	Company	U.S. Citizen?	Hotel

Visa Information:

It is absolutely mandatory that this section be completed with accurate visa and travel date information.

Trip # from Letter of Invite (LOI)	Visa Beginning and Ending Dates	Actual Travel Dates (arrival & departure dates in Moscow)	Type of Visa (Single, Dual, MEV)

This office is required to have both evening and daytime contact information. Please be as complete as possible:

- Hotel/Evening Phone #:

- Daytime Work Locations and Phone Numbers (where you can be located during the day while you are in Russia):

- U.S. Point-of-contact & Office Phone Number (should be someone that can be contacted in the U.S. while you are in Russia, such as a secretary or travel coordinator):

- Emergency Point of Contact (should be someone that can be contacted after hours in the U.S. while you are in Russia, such as a family member or friend).

Other Information/Special Considerations:

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(SECTION J-1 Appendix I) Mission Integration Contract

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APPENDIX I**GOVERNMENT APPLICATIONS**

NASA will provide access to these applications:

Application Name	Description
Action Tracking Application (ATA)	The Action Tracking Application (ATA) is used to track program actions
Crew Language Training Metrics	Intranet based database used for collecting crew training data
COSMOS	COSMOS is used to track status of change requests/directives for ISS
Common Schedules Database	Use for collection of schedule data for ISSP
Integrated Risk Management Application (IRMA)	Application used to identify, status and track programmatic risks, watch items, and cost threats
Electronic Document Management System (EDMS)	Application which will house the program authorized library

WORK LOAD INDICATORS

Mission Integration

SOW #	Section Title/Performance Requirements	Products/Deliverables	Approximate Magnitudes	Typical Schedule	DRD
1.0	MANAGEMENT AND INTEGRATION				
1.1	PROGRAM MANAGEMENT				
1.1.1	Program Management and Administration (CF)				
1.1.1.1					
	BUSINESS MANAGEMENT (CF)		Manage 260 EP	N/A	
	Identify management approach	MI Program Management Plan	25 Pages	With Proposal & at Contract Award	B-PM-01
	Identify Transition Approach	Mission Integration Transition Plan	25 Pages	With Proposal & within 45 days of addition/deletion of major content	B-PM-03
	Organization Chart	Chart	1-5 Pages	Contract start with monthly updates within 5 days of change to key personnel	B-PM-05
	Develop COFR Approach	CoFR Implementation Plan	25 Pages	30 days after Authority to Proceed, Revised within 60 days of contract start	B-PM-06
1.1.1.2					
	Track Program Status	Performance Management Reviews	10-20 pages Metrics; 10-20 Pages Cost Reporting; 5 Pages Risk	Monthly & Quarterly	B-PM-02
	Close Out	Contract Close Out Plan		One Year Before End of Contract	B-PR-01
	Performance Assessment	Plan and Reports	25 Page Plan, 25 page report quarterly	Draft Plan with proposal, update within 30 days of contract start, revised within 90 days after contract start, Review annually afterwards with updates as required	B-PM-04
1.1.1.3	MIS Data Requirements (CF)				
		Update MIS Database		Weekly	B-PM-06
1.1.1.4	Integrated Reporting (CF)				
1.1.2	Internal/External Program Review Support (LOE)	Integrated Office Metrics Package		Monthly	
1.2	BUSINESS MANAGEMENT (CF)	Prepare and Present for Internal/External Reviews		As Required	
1.2.3	Resources Management				
1.2.3.1					
		Contract Financial System	Develop, Implement, Maintain and Update	Baseline within 30 days of Authorization to Proceed, Monthly reports	B-PC-01
1.2.3.2					
		Performance Measurement System (PMS)	Develop, Implement, and Maintain	Monthly, 10 days after previous month end	B-PC-02
		Cost Performance Reports (CPR)	533M Reports	30 operating days after contract start	B-PC-05
1.2.3.3					
		Workforce Reports	Organizational/Manpower Report	Monthly, 10 days after previous month end	B-PC-03
1.2.3.4					
		WBS and Dictionary	15 to 25 Pages	Initial with Contract & Update 30 days after contract start, and as Required	B-PC-04
1.2.5	Scheduling				
1.2.5.1					

WORK LOAD INDICATORS

Mission Integration

SOW #	Section Title/Performance Requirements	Products/Deliverables	Approximate Magnitudes	Typical Schedule	DRD
	Assess Top Level Program Schedules; Develop and Assess Detail Program Schedules	Level I, II, & III Schedules	US Assembly Flights: Level I schedules (1-2 pages) , 20-30 milestones Level II and III schedules up to 10 pages Utilization Flights: Level I schedules (1-3 pages) , 20-30 milestones Level II and III schedules up to 25 pages IP with Logistics Carriers: Level I schedules (1-3 pages) , 20-30 milestones Level II and III schedules up to 25 pages	Monthly	B-PC-07 B-PC-06
1.2.5.2					
	Update Top Level and Detail Program Schedules	Updated Level I, II, & III Schedules	US Assembly Flights: Level I schedules (1-2 pages) , 20-30 milestones Level II and III schedules up to 10 pages Utilization Flights: Level I schedules (1-3 pages) , 20-30 milestones Level II and III schedules up to 25 pages IP with Logistics Carriers: Level I schedules (1-3 pages) , 20-30 milestones Level II and III schedules up to 25 pages	Weekly	
1.2.5.3					
	Provide Schedule Data to External Users		5 to 10 Milestones May Need Resolution	Bi-Weekly	
1.2.5.4					
	Interface with Common Schedules Database		US Assembly Flights: Level I schedules (1-2 pages) , 20-30 milestones Level II and III schedules up to 10 pages Utilization Flights: Level I schedules (1-3 pages) , 20-30 milestones Level II and III schedules up to 25 pages IP with Logistics Carriers: Level I schedules (1-3 pages) , 20-30 milestones Level II and III schedules up to 25 pages	Weekly	
1.2.5.5					
	Schedule Risk Assessment Capability		TBD	Monthly	
1.2.5.6					
	Provide Summary Level Office Schedule Reports	Reports	1-10 page summary reports of Level III schedule Milestones for up to 10 NASA office managers	Weekly/Monthly	B-PC-06
1.3	CONFIGURATION MANAGEMENT/DATA INTEGRATION (CF)				
1.3.1	Configuration Management (CM)				
	Implement & Administer CM Operations In Accordance with the ISSP CM Requirements (SSP 41170), Documentation Standards & Guidelines (SSP 50010-01), and the CM Handbook (SSP 50123-01)		N/A		
1.3.1.1	Management and Administration				

WORK LOAD INDICATORS

Mission Integration

SOW #	Section Title/Performance Requirements	Products/Deliverables	Approximate Magnitudes	Typical Schedule	DRD
	Identify CM Approach	CM Plan	10 pages	Draft with proposal, final 60 days after contract award & update as required	DRD B-CM-01
	Develop and Assess CM Metrics	CM Metrics	Set of approx 15 to 20 metrics - typically takes 3 people 3 to 4 days to pull together at the beginning of the month.	Monthly	
1.3.1.3	Configuration Control / Change Management				
1.3.1.3.1					
	Process Changes	Process CR's	In Accordance with SSP 50123-01 - approx. 200 Mission Integration CRs per year plus review and evaluate 1000 CRs initiated outside the MI contract.	daily activity -	
1.3.1.3.2					
	Input, Maintain & Validate the Configuration Status Management Operations System (COSMOS) Database	Updated COSMOS Database	This applies only to the estimated 200 Mission Integration initiated CRs per year	daily activity -	
1.3.1.4	Data Management				
1.3.1.4.1					
	Provide an Engineering Release Unit	Release of Baseline Documentation & Updates	15 New Documents or Document Updates	Monthly	
1.3.1.4.2					
	Operate a Configuration Management Receipt Desk (CMRD)	Receiving and forwarding various pieces of change paper	Process 120 items that include for example CRs, Directives, Directives for IP Signatures, Evaluation Packages, and Submitted Evaluations	Monthly	
1.3.1.4.3					
	Provide Document Quality Assurance (DQA) for all NASA controlled Program documentation identified under this contract	Develop blank book templates. Provide document editor services to ensure documentation meets standards identified in SSP50010-01.	20 to 25 books/updates per month	Daily	
1.3.2	Program Data Integration				
1.3.2.1					
	Maintain Mission Integration Dataset Blank Book (SSP 50622-02).	Integrated Up Dates for PI&C contract	10 Pages of changes	Yearly	
1.3.2.2					
	Monitor Data Flow Related to this Contract and Recommend Improvements	Recommended Improvements to Data Flow	Support to about 10 meetings - skill dependent upon data issue	Year	
1.4	PROGRAM INFORMATION TECHNOLOGY (CF)				
			ISS IT Information Systems Plan (SSP 50013).		
1.4.1	IT Management				
	Develop and implement the IT Management Plan	IT Management Plan	Approximately 20-25 pages for the plan. Approximately 80 hrs/yr to maintain the plan.	Plan baselined 30 days after contract award and maintained annually	B-IT-01
	Report IT Capital Investment Planning	IT Capital Investment Plan & reports	Approximately 80 hrs/yr to develop plan.	Annually	
	Develop IT Security Plan	IT Security Plan	Approximately 80 hrs/yr to develop plan. Security incident response takes approximately 160 hrs/yr.	30 days after Authority to Proceed	B-IT-02
1.4.2	Software Tool Development and Operations				
	Sustain ITD and MIDAS	Operational Tool	Updates twice/yr	Support continuous, Updates twice/yr	
	Develop/maintain PC based tools	PC tools	Updates twice/yr	Continuous	
1.5	INTERNATIONAL INTEGRATION				
1.5.1	Russian Language and Logistics Services		All Translations and Interpretations Requires ISS Lexicon Adherence		
1.5.1.1	Translation (IDIQ)				
	Update and Maintain the ISSP Lexicon	ISSP Lexicon	Estimate 10 new words a year	Update as required	
	Translation services to include Russian to English and English to Russian for TRF defined tasks (non-continuous)	Translated Documents	1,400 to 1,800 Pages of Text ; 250 English words per page typical	Monthly	

WORK LOAD INDICATORS

Mission Integration

SOW #	Section Title/Performance Requirements	Products/Deliverables	Approximate Magnitudes	Typical Schedule	DRD
	Provide configuration, repository and tracking control of all translated products such as Documents, E-Mail, Letters, Reports and Telecon Notes. A data based system shall be used with NASA data information retrieval and limited access for sensitive/confidential personal products.	Product Data Files with logging and retrieval capabilities.	Average of 2500 pages of translated products	Monthly	
1.5.1.2	Interpretation (IDIQ)				
	Update and Maintain the ISSP Lexicon	ISSP Lexicon	Estimate 10 new words a year	Update as required	
	Non-continuous interpretation of ISS Russian to English and English to Russian Conversations. This includes formal meetings, impromptu meetings, telecons and video conferencing.	Interpreted Conversations	31,000 hours of interpretation split evenly between Russia and U.S. (FY02)	Yearly	
	Interpretation at Baikonur	Interpreted Conversations	up to twice	Annually	
	Continuous Tasks:				
	MCC-H Real-Time Support for Space to Ground Communications, voice loops, Flight Director, CAPCOM, and IMMT	Simultaneous interpretation	10,000 hours/yr	weekdays (including holidays), 2 shifts per day, 16.5 hours with handover, IMMT's nominally twice per week (2 hours) Additional support during joint Shuttle/ISS operations during docking and undocking, daily IMMT's, and daily voice loop support includes weekends	
	Mission Control Support for Execute Packages (Russian Radiograms), planning products, and associated telecons (Nominal and special operations)	Execute Packages (radiogram) translations, planning product translations, and telecon interpretation support	3000 hours/yr	Monday-Friday, 9:00 AM - 5 PM, Weekends and Holidays 10-5, Surge support periods include week prior to completion of Russian EVAs, week prior to Soyuz launch through undock of previous Soyuz, 2 days prior through docking of new Progress, Launch through undocking of Shuttle	
	Russian Regional Consultant Group, Russian Segment Execution Team and Russian Segment Instructors - Houston	Consecutive interpretation support between consultants and RIO, Flight Director, Ops Planners, etc. RSET, and RSI	7250 hours/yr	Monday-Friday, 2 shifts/day (16.5 hours with handover)	
	ODF support- Houston	Translations of operations products	Up to 3 concurrent multi-element procedure translation tasks, Requested travel up to 3 trips/year to Moscow (5580 hours)	Monday-Friday, 9-5, Travel one month duration	
	HSG support - Moscow	Voice loop interpretation & translations	Prime Hour support, 2 voice loop and concurrent translation support, Non-prime time support 1 voice loop plus translation support for a total of 27600 hours/yr	Prime Time M-F 9:00-21:00 Non-Prime all other times 24/7	
	ODF support- Moscow	Translations of operations products	up to 3 concurrent Russian ODF translations at RSC-E or MCC-M (6350 hours)	Monday-Friday 9-5 Moscow Time, additional in off-nominal situations	
	PAO support - Moscow	coordination of crew and ground PAO tasks nominally plus additional support for off-nominal or during PAO in-flight events after business hours	2120 hours	Monday-Friday 10-6 Moscow time nominally plus additional support for off-nominal or during PAO in-flight events after business hours	
	EVA Support Moscow	Interpreted Conversations& translations for real-time and training	4250 hours	Support on console during EVA preparation and ops, support to crew training, simulations and EVA related technical meetings	
	Volga/MTLO - Moscow		1860 hours/yr	9-5 Monday-Friday	
	Simulations	1) RIO support 2) Flight Director 3) CAPCOM 4) S/G and A/G 5) Role-Playing	3350 hours/yr	As scheduled	
	Crew Full Time Support - Star City	Direct support to crew	5500 hours	Crew Training Schedule	
	Crew Training Houston	Direct support to crew	4800 hours	per year	
1.5.1.3	Russian and English Language Training				
1.5.1.3.1	JSC Language Education Center (CF)				

WORK LOAD INDICATORS

Mission Integration

SOW #	Section Title/Performance Requirements	Products/Deliverables	Approximate Magnitudes	Typical Schedule	DRD
	Provide Clerical and Administrative Services to the JSC Language Education Center (JLEC)	Manages the JLEC library (including books, videos, software, etc.), textbook supply, and classroom material supply. Coordinates materials to be sent to the Tech Library in Bldg. 45 Serves as a liaison between the MIC and Human Resources Office -- handling various issues and data requests as they arise.	Library contents in Contract Strategy Library (JLEC Materials)	8-5 Daily	B-II-03 B-II-04
	Coordinate, schedule and track students, teachers, and class size and locations. Maintain crew records in Crew Training Metrics database	Scheduled classes, assigned students, coordinated teacher availability, log attendance, and provide Centerwide Russian Language Summary Report. Maintain student records	Coordinate 25 training coordinators, 150 non-astronaut students enrolled, and 15 courses Provide attendance by student and course summary attendance	Quarterly	
	Production of the Language Newsletter		50 Pages Typical	Quarterly	
1.5.1.3.2	Crew Language Training (IDIQ)				
	Provide Russian to English and English to Russian training both in Russia and U.S..	Training Sessions Development of curricula	25,000 hours of training for Russian language (FY02) 130 classes per year which includes: 3 Pre-Travel, 20 Phase I, 10 Russian 2A, 7 Russian 2B, 6 Russian 2C, 4 Russian 2D, 4 Russian 2E, 3 Russian 2F, 3 Russian 2G, 4 Russian 2H, 2 Russian 2I, 2 Russian 2J, 1 Russian 2K, 1 Russian 2L, 4 Russian 3A, 1 Acronym class, 12 Pronunciation Classes, 24 Conversation classes, 8 Astronaut candidate 7180 hours of Tutorial Training	Yearly, class syllabi delivered for each student or group	B-II-01 B-II-02
	Seamless Training Independent of Location based on a rotation of 3 weeks in visiting country and 6 weeks in home country. Crew training will be English and Russian language	Trained Crew Members	8 crews of 5 to 7 members typical made up of 4primary and 4 backup crews for 18 months	9 week rotation	B-II-05
	Portfolio testing for crewmembers	Language Skilled Personal	Oral Proficiency Interview (OPI), Teacher's Informal Evaluation, Student Self Evaluation and Instructor Observation of Technical Use of Language	120 Hours of Testing	
1.5.1.4	Use Near Immersion language training technique on select crewmembers Logistics NASA Service Evaluation Form Distribution and Evaluation, Appendix H, Form 2	Language Skilled Personal	1 Crew Member, 3 to 6 Months	Yearly	
1.5.1.4.1	Transportation Services (IDIQ) Airport /meeting transportation	Recommended Improvements	For each Translation, formal Interpretation, and training this form is required.		
	Ground Transportation, equipment maintenance and Chauffeur Services for U.S. and Russian Personnel	Local Transportation	In Russia 17 Vans In U.S. 2 Vans	As scheduled, 24/7 Typically 18 hours/day, during launch and docking up to 24 hours per day	
1.5.1.4.2	Meeting Services (LOE) Large Team meetings that require coordinating 10 or more Working Groups	Large Meeting	2 Meetings; 1 in Moscow & 1 in Houston	Yearly	
1.5.1.4.3	Travel Services (LOE) Coordinate and Support Select Official Travel		Disseminating important travel information (for example, lists of departure/arrival dates), coordinating travel plans (not to include purchasing tickets), preparing travel notifications, and coordinating policy or protocol matters	Daily/Monthly	
1.5.1.4.4	Provide services in obtaining U.S. and Russia visas at the Moscow Technical Liaison Office (MTLO) Coordinate directly with the International Relations Office (NASA/Code I) regarding all Russian and American visitor requests Liaison Services (LOE)				

WORK LOAD INDICATORS

Mission Integration

SOW #	Section Title/Performance Requirements	Products/Deliverables	Approximate Magnitudes	Typical Schedule	DRD
1.5.1.4.5	Provide the administrative and clerical support necessary to perform the logistics services specified in this SOW. Additionally, the contractor shall provide administrative and clerical support to the NASA MTLO and GCTC offices Provide for office operation and management at Russian Sites and sites at Houston. Other Related Support (LOE) Primarily in Russia provide the ability to procure miscellaneous materials or services as required by NASA	Miscellaneous Materials			
1.5.1.4.6	Astronaut Office Support (LOE) Support implementation of travel to Russia or U.S. for both Russian and U.S. astronauts and their dependents				
1.5.1.4.7	International Operations Liaison Office Support (LOE) Provide JSC onsite support in U.S. for seamless flow of staff to and from the respective offices (US/Russia). Support includes Badge paperwork, visa and passport paperwork, identification, ording and delivery of office supplies, providing, logging and tracking office equipment, manage HSG Volga Apartments matrix, etc.				
1.5.1.4.8	Maintain the HSG and Russian Interface Officer (RIO) web pages International Partners Office Russian Translation and Badging Coordination Support (LOE)	Current Web Site Status		As Required	
1.5.1.4.9	Russian Elements Office Telecon/Videocon and Travel Coordination (LOE) Provide JSC on-site support for telecons/videocons coordination from Russia Provide JSC on-site support to coordinate ISS Program Office travel to/from Russia Utilize the ITD to provide the Deputy Russian Elements Integration Manager with Russian travel requests for approval, generation of LOI's, and coordination of planned travelers with the NASA MTLO				
1.5.2	International Mission Integration				
1.5.2.1	International Shipping Coordination (CF)				
1.5.2.1.1	JSC Shipping Coordinator Coordinate shipping among IP	On time product deliveries	Average of 8 shipments	Monthly	
	Book Coordinator Bilateral Hardware/Software Exchange Agreement Lists (BHSEALS)	BHSEALS	9 Documents of 25 to 50 Pages Typical 10% Change	Yearly	
1.5.2.1.2	Moscow Shipping Coordinator Provide liaison service in Russia for the shipment of NASA equipment and personal goods into and out of Russia and Kazakhstan		Average of 3.5 shipments	Monthly	
1.5.2.3	ISS Ham Radio Project (CF) Sustain an ISS Ham Radio node through maintenance and upgrading of equipment and required crew training. Coordinate communication request as needed.		To date 65 school contacts and 7 ISS and 2 VV crew members trained	Yearly	
1.5.2.4	Joint Cargo Certification Team (JCCT) (LOE)	ISS Cargo Certification Process (SSP 50578).			
1.5.2.5	Export Management (CF) Develop Export Control Plan	Export Control Plan	20 Page Report	Yearly	B-EC-02
	Perform Export Control Audits	Export Control Audits	20 Page Document	First delivery within 30 days after contract award, Plan within 120 days of contract award, review yearly	B-EC-01
1.6	HUMAN SPACE FLIGHT COLLABORATION (LOE)				
4.0	OPERATIONS				
4.1	Mission Integration				

WORK LOAD INDICATORS

Mission Integration

SOW #	Section Title/Performance Requirements	Products/Deliverables	Approximate Magnitudes	Typical Schedule	DRD
4.1.1	Mission Requirements and Planning				
4.1.1.1	Increment/Stage Integration (CF)				
4.1.1.1.1	IDRP and IDRD Documentation (CF)				
	Book coordinate the IDRD BB (SSP 54002)	IDRD BB CR's	Core document 80 pages; updates 20% or less of document per CR	nominally two CRs per year	
	Book coordinate the IDRD FP (SSP 54100)	IDRD FP CR's	Core document 10 pages; updates 80% or less of document per CR.	2 CRs per Month	
	Increment Definition and Requirements Plan (IDRP)	IDRP	Each document is about 70 pages; 1 document per increment.	nominally 3 increments per year	
	Book coordinate the IDRD PPx (SSP 541xx)	IDRD's and CR's	Core document 240 pages; updates 70% or less of document per CR to PP-7 months + 15% per Increment per CR from I-7 to Increment start + 5 pages per month during Increment.	3 CRs per year until PP-7 months + 4 CRs per increment from I-7 to Increment start + 1 CR per month during Increment.	
	Develop, manage, and update the website content of the IDRP, IDRD FP, IDRD BB, and IDRD PP documentation	Current Web Site Status	IDRD PP and BB: Single web page with 50 links and 20 lines of text + IDRD FP: single web page with 20 links + 20 lines of text.	Update each web page weekly, average 10% of the links, 5% of the text	
	IP TIMs	Agendas, Protocols	5 pages agenda + 20 pages Protocol per TIM	1 every 4 months, 1 to 2 weeks in duration	
	IP telecons	Agendas, Minutes	1 page agenda + 2 pages Minutes per telecon	weekly	
4.1.1.1.2	Generic Groundrules, Requirements and Constraints (GGR&C, SSP 50261-01) (CF)				
	Book coordinate the GGR&C Part 1 (SSP 50261-01)	GGR&C Part 1 CR's	Core document 250 pages; update or add 5 pages per CR	CR every 2 Months	
	Develop, manage, and update the website content of the GGR&C documentation	Current Web Site Status	Single web page with 50 links + 20 lines of text	Update website every month, 10% links, 5% text	
	IP TIMs	Agendas, Protocols	Covered in 4.1.1.1.1 TIMs	Covered in 4.1.1.1.1 TIMs	
	IP telecons	Agendas, Minutes	Covered in 4.1.1.1.1 telecons	Covered in 4.1.1.1.1 telecons	
4.1.1.1.3	Station Development Test Objectives (SDTO's) (CF)				
	Book coordinate the SDTOC (SSP 50448)	SDTOC CR's	Core document 200 pages; 1 CR to update 10 process related pages + 1 CR to add a new SDTO/DTO, average 10 pages, + 1 CR to archive SDTO/DTOs + 1 SDTO WG meeting per week	1 CR per year for process related changes + 2 CRs per month for new SDTO/DTOs + 1 CR per year for archival	
	Develop and coordinate the SDTO WG agendas	Agendas, minutes	2 page agendas + 2 pages minutes	1 SDTO WG per week	
	IP TIMs	Agendas, Protocols	Covered in 4.1.1.1.1 TIMs	Covered in 4.1.1.1.1 TIMs	
	IP telecons	Agendas, Minutes	1 page agenda + 2 pages Minutes per telecon	1 telecon every 2 weeks	
	Develop, manage, and update the website content of the GGR&C documentation	Current Web Site Status	Single website with 50 links + 20 lines of text	Update website weekly, 10% links + 5% text	
	Coordinate and track the execution planning and implementation of approved SDTO/DTOs	Tracking log	Average 5 SDTOs per increment	nominally 3 increments per year	
4.1.1.1.4	Increment Resources Tracking and Reporting (CF)				
	The contractor shall collect, collate, document, and validate the as planned and actual on-orbit ISS resource usages of all of the tasks performed during each increment	On-orbit ISS resource usage records or document	Average 25 tasks per crew work day for the ISS crew + 70 tasks per day during Shuttle-ISS docked operations for 5 on-orbit ISS resources.	5 days per week for the ISS crew + 7 days of Shuttle-ISS docked operations	
	The contractor shall perform increment to increment data comparisons to identify increment trends and correlations	comparisons, trends, and correlation results	By increment, on-orbit ISS resource (5 resources), IP/P, and up to 10 categories of tasks (such as systems, utilization, EVA, transportation vehicle, Medical operations)	1 time per increment	
	Weekly reports and MIS reports	Weekly reports, MIS report	5 on-orbit ISS resources 1 time per week for the IM + 1 time per week for the MIS	Weekly	
	Increment complete final data delivery	PIER, PIR	1 Increment complete data package (with raw data) for each of the 5 on-orbit ISS resources for each product (PIER + PIR)	1 time per product per increment	

WORK LOAD INDICATORS

Mission Integration

SOW #	Section Title/Performance Requirements	Products/Deliverables	Approximate Magnitudes	Typical Schedule	DRD
4.1.1.1.5	Validate and document the actual on-orbit subsystem resource demands (volume) to the allocations established by the RIP Increment Engineer (IE) Tasks (LOE)	Compliance Report	15 on-orbit subsystem allocations (volume)	1 time per increment	
4.1.1.1.6	Console Operations Support Documentation (CF)				
	Book coordinate the PMOIP (SSP TBD)	PMOIP	Core 55 pages; update 20 percent per CR	1 CR per year	
	Collect, collate, integrate, document, control, and disseminate IMCOH changes approved by the RIP	IMCOH	Core 100 pages; update 10 percent per CR	1 CR per flight + 1 CR per stage	
	IP TIMs	Agendas, Protocols	Covered in 4.1.1.1.1 TIMs	Covered in 4.1.1.1.1 TIMs	
	IP telecons	Agendas, Minutes, actions	Covered in 4.1.1.1.1 telecons	Covered in 4.1.1.1.1 telecons	
	Organize the development of studies	Agendas, minutes, actions	2 pages agendas + 2 pages minutes per study for the PMOIP and for the IMCOH	2 times per year	
	Develop, manage, and update the website content of the PMOIP and IMCOH documentation	Current website status	1 web link to 4 web pages for each document (PMOIP + IMCOH)	Update PMOIP link 3 times per year. Update IMCOH link 1 time per flight and per stage.	
4.1.1.1.7	IMC Administration (CF)				
	Develop, manage, and update the website content of the IMC	Current website status	Three web pages: IMC Preparations: Single web page with 50 links and 20 lines of text, update weekly, 5% links and 5% text + IMC Operations: Single web page with 50 links and 20 lines of text, update weekly, 10% links and 5% text + Active Increment: Single web page with 100 links and 40 lines of text, update daily during Shuttle-ISS docked operations and weekly during stage operations, 10% links and 5% text	IMC Preparations: weekly IMC Operations: weekly Active Increment: daily during Shuttle-ISS docked operations and weekly during stage operations	
	Develop and confirm the official list of personnel working in the IMC during real-time operations for flights and stages	IMC Personnel list	50 persons during each Shuttle-ISS flights + 20 persons for each stage	1 time plus updates prior to each flight and stage	
	Coordinate, facilitate, and confirm building badging and facility access to the computer systems for personnel who will work or visit the IMC	1 building form + 1 computer form	Average 10 persons per flight or stage for each form	1 time per flight + 1 time per stage	
	Develop and deliver to the NASA IM archival files and an archival library of Increment and Launch Package electronic files and hardcopy records from completed flights and stages	Archival records	1 CD of electronic files per flight + 2 CDs of electronic files per stage + 500 hardcopy pages per increment	1 time per flight + 1 time per stage	
4.1.1.1.8	Administration and Schedules Support (CF)				
	Update IMT schedules (reference DRD B-PC-06) and report to NASA weekly	IMT specific Schedules	1 detailed schedule per IMT with an average of 140 line items Average 5 IMTs per year	Initial schedule developed at I-14 months; updated every 2 weeks from I-14 to I-12 months; updated weekly from I-12 months to Increment start	B-PC-06
	Provide administrative support to the RIIT, RIP, and each IMT as defined in 4.1(e)	Meeting agendas and logistics, minutes and actions and status, points of contact, distribution lists, calenders of events	Meeting agendas and logistics: 1 page per IMT and for the RIP meeting Minutes and actions and status: 3 pages per IMT and for the RIP meeting Points of contact: 25 persons per IMT, 20 persons for the RIIT Distribution lists: 100 persons per IMT and 150 persons for the RIP Calenders of events: 4 weeks (1 current week + 3 sequential weeks) with average 40 events for the RIIT Average 5 IMTs per year	RIIT: weekly meeting. RIP: weekly meeting IMT: Initial products developed at I-14 months; updated every 2 weeks from I-14 to I-12 months; weekly from I-12 months to Increment start.	

WORK LOAD INDICATORS

Mission Integration

SOW #	Section Title/Performance Requirements	Products/Deliverables	Approximate Magnitudes	Typical Schedule	DRD
4.1.1.1.9	Develop and update Program RIIT, RIP, and IMT websites as defined in 4.1 (f) Station Tactical Increment Consumables and Resource Planning (LOE)	Current website status	RIIT: Single web page with 50 links and 20 lines of text, update 10% links and 5% text weekly. RIP: Single web page with 50 lines of text, update 10% links and 5% text weekly. Each IMT: Single web page with 50 links and 50 lines of text; average 5 IMTs per year; update 10% links and 5% text per schedule	RIIT: weekly RIP: weekly Each IMT: Initial products developed at 1-14 months; updated every 2 weeks from 1-14 to 1-12 months; weekly from 1-12 months to Increment start.	
4.1.1.2	Launch Package Integration				
4.1.1.2.1	Launch Package Engineer (LPE) Tasks (LOE)				
4.1.1.2.2	LPE Joint Operation Requirements Development Tasks (LOE)				
4.1.1.2.3	LPE Launch Vehicle Integration Requirements Development Tasks (LOE)				
4.1.1.2.4	Launch Site Integration / De-Integration Activities (LOE)				
4.1.1.2.5	LPE Real-time and Post-Mission Support Tasks (LOE)				
4.1.1.2.6	Flight Station Tactical Resource Management (LOE)				
4.1.1.2.7	Certificate of Flight Readiness (CoFR) Process Support (LOE)				
4.1.1.2.8	Launch Package Support Functions (CF)				
		Launch Package Schedules	US Assembly Flights: Level I schedules (1-2 pages) , 20-30 milestones Level II and III schedules up to 10 pages Utilization Flights: Level I schedules (1-3 pages) , 20-30 milestones Level II and III schedules up to 25 pages IP with Logistics Carriers: Level I schedules (1-3 pages) , 20-30 milestones Level II and III schedules up to 25 pages	Update weekly L-16 months to L-6 months, then daily to launch	B-PC-06 B-PC-07
	Administrative Support	Minutes, agendas, distribution lists & updates, scheduling rooms	All team meeting and 5 active LPT meetings For each LPT meeting, 1 page agenda, 2 page minutes of meetings, 175 persons on POC list,	Weekly	
			Payload Planning Working Group Meeting Support for Logistics Flights and IP face to face TIM's, 1-3 page agendas, 1-5 page minutes, Action Item Log up to 40 items, Data Package development (up to 15 presentations, 200 copies), POC listings 175 names, Attendees listings, Scheduling of facilities	Quarterly	

WORK LOAD INDICATORS

Mission Integration

SOW #	Section Title/Performance Requirements	Products/Deliverables	Approximate Magnitudes	Typical Schedule	DRD
			One time support to each flight including Launch Package Assessment Review , Payload Readiness Review, Schedule TIM Initial and Final (Logistics/Utilization flights), Post Flight Lessons Learned, and Transfer Cue Card Meeting Products are 1-3 page agenda, 1-5 page minutes, Action Log up to 40 items, POC listings up to 175 people, Attendees listings 30-50 people, conference room coordinations	LPA 4 months prior to launch PRR 3 months prior to launch Schedule TIM Initial 18 months prior to launch Schedule TIM Final 10 months prior to launch Post Flight Lessons Learned 1 month after return Transfer Cue Card Meeting 1 month after return	
	Update websites	Flight webpages	Posting of all launch package products, team rosters, procedures/work instructions with links to other related websites	Weekly	
4.1.1.3	Manifest				
4.1.1.3.1	Manifest Process Support (CF)				
	Develop and update manifest schedules	Manifest Schedules	10 milestones per flight for NASA schedules, team level schedules have approximately three times as many milestones	Weekly	B-PC-06
	Update the manifest and MIDAS website	Current Web Site	For MWG, main page (with 12 subpages) has 5 links to the MIDAS Oracle system (for manifest tables by flight and reports), 6 links to process presentations, manifest flight assignment listing, and listings of each IDRD Annex 1's CR For MIDAS, All MIDAS documents and interfaces to report generators, Updates 20% or less	Update MWG page monthly with released CR documents (nominally 6 per month), updates to assignments & POC's (10% or less change) Review process documents quarterly Update MIDAS page quarterly with changes	
	Coordinate, facilitate, and conduct telecons and TIMs	Agendas, protocols, meeting support	2 hour telecons with Russia, ESA, and Japanese, (Agendas one page, other materials generally existing reports or action listings) 2 week face to face meetings with Russia, ESA, and Japanese 2 page Agenda, Protocol 5-10 pages not counting attachments	Russian Telecons weekly, other IP's biweekly within 14 months of flight. Face to face 3/yr /partner within 14 months of flight. Face to face meetings held twice per year before the 14 month milestone is reached for the first flight.	
	Administrative support	MWG Agendas, Updates to MIDAS, Team Rosters	MWG Agenda 1-2 pages, drawn from MIDAS for submitted MR's 3 hour meeting followed by a summary report update and update in MIDAS of 50 MR statuses Update of team flight assignments, distribution list for MWG (150 people)	Weekly	
		Files of signed MR's	25 MR's	Weekly	
4.1.1.3.2	Flight Specific Manifests (CF)				
	Coordinate Manifest Request dispositions and request closures at the MWG	Approved MR's	Number of MR's per flight varies with schedule, nominally 20 per week per flight (lower early in schedule, more close to flight)	Weekly	
	Book coordinate the program flight manifest	IDRD Annex 1	Average number of line items in manifest table for Shuttle logistics flight is 2000, for Shuttle assembly flight is 750, for Progress is 250, for Soyuz is 100. Estimate for ATV is 1000 and for HTV is 1500	Nominally 7 CR's Per Flight per the MIT template	
	Maintain Manifest Status in MIDAS	Updated MIDAS content by flight	Each MR contains approximately 20 line items, 12 datafields regularly maintained in MIDAS, another 24 fields as applicable	Weekly	
	Lessons Learned	Presentation	2 page presentation	Once per Flight/Increment	
	IMC Support	Assistance as needed	Support during transfer operations to respond to manifest questions, support RMDP tag-up	Daily during Shuttle flight	

WORK LOAD INDICATORS

Mission Integration

SOW #	Section Title/Performance Requirements	Products/Deliverables	Approximate Magnitudes	Typical Schedule	DRD
	Middeck Manifest	ICA	Automated report from MIDAS	At major milestones or by request from LPM	
	Report to MIOCB	Presentation	1 page summary of items changed, Certification report nominally 7 pages	Weekly L-6 weeks to Launch	
4.1.1.3.3	Tactical/Increment Manifest (LOE)				
4.1.1.3.4	Database Capability (CF)				
	Sustain MIDAS	Manifest Database	Disk Usage 750 Mb, Total Executable s/w file size 33 Mb	Continuous	B-MI-01 B-MI-02 B-MI-03
	Upgrade database regularly	Software Upgrades	Typically 10 minor discrepancies in work, 1-2 major discrepancies Upgrade of commercial platform nominally once per year	Quarterly unless critical update required	B-MI-04
	Support IP and program database interfaces	ICD's, datafiles	4 documents 20 pages per document, changes 5% or less of content Associated software changes	Updates as required - nominally once per year	
4.1.1.3.5	MIDAS System Administration (CF)		200 Users, 5 new accounts/month, 15 transfers to VMDB/month, archive once per week		
	Update tables and pick lists	Changes in MIDAS	2 changes per month	Within 8 hours of request	
	Assign new accounts, control privileges, keep training records		200 Users, 5 new accounts/month, archive once per week		
	File transfer to VMDB	Datafile	15 transfers to VMDB/month		
	Archive files	Electronic Archive	All flights with changes (nominally 10 per week)	Weekly	
4.1.1.3.6	Parts Data Maintenance (CF)				
	Review MR's	100 per month	100/month	Weekly	
	Add new parts	New entries to database	150-200 parts per month	Continuous	B-MI-05
	Validate part data changes	Corrections to database	60-70 corrections per month	Continuous	
	File transfer to IPs	File transfer	Nominally 3 per IP flight	Per the MIT	
4.1.1.4	Inventory Management System (LOE)				
4.1.1.4.1	Inventory Management System (IMS) Processes				
4.1.1.5	Crew Provisioning/Mission Habitability				
4.1.1.5.1	Crew Provisioning Management (CF)				
	Conducting Crew Provisioning Working Group (CPWG) meetings, telecons and TIMs with IP's	Agendas, Minutes	2 Hour telecons, 1 week face to face Agenda typically one page, Protocols 5 pages, weekly minutes 2 pages	Semi-Monthly Telecons, Face to Face 2/yr	
	Book coordinate the CPMP (SSP50409).	CPMP	Core of document ~20 pages, updates 10% or less of document	Once per year if required	
	Provide updates to charter	Updates	Charter is 3 pages, updates 10% or less of content	Once per Year if required	
	Updates to SPIP Vol. 2 and MIT	Updates	9 Milestones in MIT, 6 Pages in SPIP Vol 2 - Estimate 10% or less of content change in any year	Once per Year if required	
	Maintaining crew provisions team schedules	Schedules	9 Milestones per flight for NASA schedules. Team schedules more detailed with 3 times that number of milestones	Update Monthly	B-PC-06

WORK LOAD INDICATORS

Mission Integration

SOW #	Section Title/Performance Requirements	Products/Deliverables	Approximate Magnitudes	Typical Schedule	DRD
	Deliver detailed manifest requirements	MR to MWG, Detailed list to NASA and supplier organization, delivery requirements, replan impacts and products	20 bags of clothes per crew and 15 bags of hygiene and towels, nominally submitted via 3 MR's, Projected, Actual, and Late Requests. Nominally 35 items per bag. Changes in crew, schedule, or errors will drive updates to MR's. Nominally once per increment changes occur to schedule or crew members that requires replan assessment and in most cases changes to supplies at any point in the flow	Per Crew Provisions MIT (SSP 50489)	
	Monitor on-orbit usage, formally document, review for trends and update rates	Inputs to GGR&C, presentations as required	10 items are tracked by RIP, usage rates rolled up to bag level for clothing, hygiene, towel, battery, and office supply pantries	By increment (3/yr)	
	Train crews	Cue Cards, Notes for crews	One page summary of expected usage, One Cue Card	Once per increment crew	
	Collect and recommend new items for Catalogue, update catalogue	Updates to Joint Crew Provisions Catalogue	Catalogue is 350 pages including title, picture, and usage rate of each item. Items include Russian and US clothing, hygiene items, towels and napkins and office supplies, Update nominally 10% or less	Review Annually	
	Update website	Web Page	Single page with links to crew provisions documents (7 items) and product examples, changes 10% or less of content	Review Monthly & update as required	
	Solicit resupply items from crew	MR with additional crew items	One MR with office supplies, batteries, specific hygiene items, etc.		
	Conduct Crew Debrief	Questions and minutes	One hour debrief, typically 50 questions and less than 10 pages of minutes	Once per Increment crew	
	Submit Lessons Learned	Identified lessons	~ 2 page presentation	Once per increment crew	
4.1.1.5.2	Waste Management (LOE) Book Coordinator function for Management Plan for Waste Collection and Disposal (SSP50481) Updates to SPIP Vol. 2, GGR&C, and MIDS BB Coordinate, facilitate, and conduct TIM's TWIG support Maintain the WM website Provide WM schedules Prepare integrated assessments and present various topics, such as projected/actual waste consumable usage rates, inventory on-orbit, and projected waste volume and disposal status, specific safety or risk issues and R&D issues. Progress disposal candidates Coordinate with IMC and provide on-call WM support, support off-nominal consumable usage or requirements Lessons Learned	SSP50481 TCM matrices Updates Current Web Site Status Schedule WM Assessments; WM presentations, CoFR inputs Data package for Russia Presentation chart	70 page document, changes nominally 10% of the document 3-4 pages per book, changes 20% or less For Russia, 2 telecons per month, face to face twice per year at alternate locations (Russia and US) For Japan and ESA, 2 telecons per month within 4 months of flight, and TIMs once per year per vehicle For all: 3 actions and 1 page of protocol per telecon, and 10 Actions, 1 presentation and 5 pages of protocol per face to face TIM Meeting 1.5 hours, one page agenda, 2 actions per meeting, 1 page of minutes Home page and catalogue page, about 25 links per page, 5 items on Home page require regular update, 10% change on catalogue page One major milestone, 10 internal 6 items tracked, review 100 MR's per month (10% of MR's indicate waste generation and must be assessed further), Generate 3 MR's per increment Presentations nominally 10-16 pages (common format 6-12 graphs) 3-4 Progress flights per year, 3-4 candidate disposal items, data includes mass, dimensions, drawing and certification paperwork 3-4 requests for support (off-nominal events) and 1 Chit 2-3 Lessons Learned	Once per Year Telecons twice per month TIM's twice per year Bi-weekly Home page weekly, Catalog twice per year Weekly Weekly assessments Bi-weekly presentations Progress flight schedule Shuttle mission plus weekly tag-ups with IMC Each Increment	B-PC-06

WORK LOAD INDICATORS

Mission Integration

SOW #	Section Title/Performance Requirements	Products/Deliverables	Approximate Magnitudes	Typical Schedule	DRD
4.1.1.5.3	Debrief Inputs	Questions, Minutes	Updates from previous debriefs (25 questions) + nominally 3 new items, one debrief per increment, 3 pages minutes	Each Increment	B-PC-06
	Support de-integration requirements/return	Inputs to RMDP	Support 5 RMDP coordination meetings per MPLM or SH flight, coordinate with 2-3 phone calls with Cargo Mission Contractor representative for contact information and special requirements	Each Shuttle flight	
	Document waste management hardware	Catalog	Number of items in catalog, 15, 15 % updates	Review twice per year, update as required	
	Support WM hardware development and procurement	CRs, updates to catalog	One new procurement, One new development	Per year	
	Housekeeping (HK) Integration (LOE)				
	Document housekeeping processes	Updates	10 pages, 10% update, 10 teams to coordinate requirements with	Yearly	
	Review and coordinate HK products and procedures with flight operations	Updates to procedures	2 procedures and timeline to review	quarterly - with pre-increment updates	
	Inputs to SPIP Vol 2	Updates	3-4 pages per book, changes 20% or less	Yearly	
	Maintain the HK website	Current Web Site Status	Home page and catalogue page, about 25 links per page, 2 items on Home page require regular update, 10% change on catalogue page	Home page weekly, Catalogue twice per year	
	Support HK Meetings	Status, minutes, implementation of decisions	one page agenda, 2 actions per meeting, 1 page of minutes	Monthly	
	Telecon's/TIM's with partners, action closure, agenda topics, provision of materials, development of protocols	Agenda, materials, protocols, action tracking and results	1 telecon monthly and 1 TIM yearly (alternating locations), Agenda for each, For TIM: 10 actions, 5 pages protocol, one presentation	Telecon monthly, TIM yearly	
	Provide HK schedules	Schedule	One major milestone, 3 internal	Monthly	
	Prepare integrated assessments and present various topics, such as projected/actual HK consumable usage rates, inventory on-orbit, and projected stowage volume, specific safety or risk issues, and R&D issues.	HK Assessments; HK presentations	5 items tracked, Generate 4 MR's per year, Review MR's for HK impacts (5 per year must be further assessed) Presentations nominally 5 pages	Assessments once per increment Presentations quarterly	
	Provide consumable requirements	manifest and delivery requirements	5 consumable items supplies for 1.5 crew transfer bags of cargo, coordinated with NASA and GFE sustaining contractor	twice per year	
	Coordinate with IMC and provide on-call HK support, support off-nominal consumable usage or requirements, track limited life HK items		2 requests for support, review of HK consumables, 4 items tracked for limited life	Each increment	
4.1.1.6	Debrief Inputs	Questions, Minutes	Updates from previous debriefs (10 questions) + nominally 2 new items, one debrief per increment, 1 pages minutes	Each Increment	
	Lessons Learned	Presentation chart	2 Lessons Learned	Each Increment	
	Document waste management hardware	Catalog	Number of items in catalog 12, 15 % updates	Review twice per year, update as required	
	Support WM hardware development and procurement	CRs, updates to catalog	One new procurement, One new development	Per year	
4.1.1.6.1	Imagery				
	Imagery Processes (CF)				
	Book coordinate Imagery requirements documents	Updates to SSP 50502, SSP 50486, SSP 50521	Requirements portion of documents are 10-20 pages, CR's nominally will affect 20% or less of document	Once per year	
	Update SPIP Vol 2, MIT, GGR&C, and MIDS BB	Imagery inputs to book coordinator	Imagery 5-10 pages of affected documents, changes nominally 20% or less	Once per year	

WORK LOAD INDICATORS

Mission Integration

SOW #	Section Title/Performance Requirements	Products/Deliverables	Approximate Magnitudes	Typical Schedule	DRD
	Facilitate TIMs, telecons with IPs	Agendas, protocols, presentations	Nominally 3 telecons per month, 2 Face to Face meetings twice per year at alternating locations (JSC and IP location) Face to Face generally 2 weeks Agendas typically one page, protocols 12 pages, presentations vary with technical subject	Monthly/Semiannually as defined in Magnitude	
	Support IWG and related meetings	Action responses, status reports	3 tag-ups per week with other JSC support organizations	Weekly	
	Maintain Team Schedules	Schedules	Nominally 10 milestones per flight for NASA schedule, detailed team schedules about 3 milestones for each NASA milestone	Weekly	B-PC-06
	Provide Admin support	Notifications, Logistics, Agendas, Copies of handouts, POC listings for US and IP personnel	Notifications once per IWG/MWG meeting (2 per month), One page agendas, POC listing 50 people, Minutes 1-2 pages, Action items typically 20 or less, Support to Face to Face meetings when in Houston (as described in TIM area above)		
	Update website	Webpage	6 interlinked pages with 10 links to other websites, 15 process/generic documents plus posting of all PFIP and Annex 3 documents	Process documents review monthly for updates, PFIP and Annex 3 post as developed/updated per MIT (SSP 50489)	
4.1.1.6.2	Pre-Flight Imagery (CF)				
	Review and control PFIPs	PFIP	Typical number of images described are 2500 for assembly and 250 for logistics flight	Develop once per flight, update/baseline once per flight	
	Coordinate discrepancy reports		10% of delivered images, nominally 2 minutes per discrepancy	Continuous	
	Track and report preflight imagery submittal status	Input to CoFR by flight	Number of images defined above	Report monthly and for CoFR by flight	
4.1.1.6.3	On-Orbit Imagery (CF)				
	Book coordinate On-Orbit Imagery requirements	IDRD Annex 3	Nominally 25-50 requirements per flight depending on complexity, and approximately 60 requirements per increment	One per planning period updated once per flight	
	Review and validate distribution requests		5 per month, 15 minutes per validation	Continuous	
	Review and update procedures	Updates to procedures	Procedures are 6 pages, updates 20% or less of content	Review annually	
4.1.1.6.4	Special Requirements and Technology Advancement (LOE)				
4.1.1.7	Program Operations Integration (CF)				
4.1.1.7.1	(CF)				
	Serve as ISSPO Point of Contact for all flight rule evaluations	Flight Rule Evaluation Packages	5 pages per flight rule	2 Packages/week	
	Submit flight rule changes to ISSP Flight Rules Control Board representative for approval	Approved or Disapproved Changes	20 pages per change	1 per month	
4.1.1.7.2	(CF)				
	Book Coordinator Station Program Implementation Plan Volume 1 – Program Management P Plan (SSP 50200-01)	Change Request	150 page document, 10% change per CR	Once per Year	
	Book Coordinator Station Program Implementation Plan Volume 2 – Program Planning and Manifesting (SSP 50200-02)	Change Request	160 page document, 10% change per CR	Once per Year	
	Book Coordinator Space Station Interior and Exterior Operational Location Coding System (SSP 30575)	Change Request	75 page document, 10% change per CR	Once per Year	
	Book Coordinator Certification of Flight Readiness Process Document (SSP 50108)	Change Request	120 page document, 10% change per CR	Once per Year	
	Book Coordinator Operations Office Certification Of Flight Readiness Implementation Plan (SSP 50230)	Change Request	60 page document, 10% change per CR	Once per Year	
	Book Coordinator ISS Mission Integration Template (SSP 50489)	Change Request	90 page document, 10% change per CR	Once per Year	
	Book Coordinator Onboard Information Technology Operations Concept (SSP 50656)	Change Request	50 page document, 10% change per CR	Once per Year	

WORK LOAD INDICATORS

Mission Integration

SOW #	Section Title/Performance Requirements	Products/Deliverables	Approximate Magnitudes	Typical Schedule	DRD
4.1.1.7.3	Book Coordinator the Post Mission Planning Document (CF)	Change Request	70 page document, 10% change per CR	Once per Year	
4.1.1.7.4	Ensure the SPIP maintains technical, management, and schedule consistency across all volumes (CF)	Consistency Report	10 to 15 pages per change	Twice per Year	
4.1.1.7.5	Book Coordinator SPIP Volume 1, Annex C (SSP 50200-01 ANX C) (LOE) Assist in developing the definition and scope of the assigned special project/action	Change Request Presentations/Reports	30 to 40 pages per change 100 page report or presentation typical	Twice per Year 2 to 3 times per Year	
4.1.1.8	Reserved				
4.1.1.9	On-Orbit Stowage Capabilities and Configuration				
4.1.1.9.1	Internal Stowage Capabilities And Configuration (CF)				
	Internal Stowage Capabilities And Configuration				
	Book Coordinate, Generic OSCAR (SSP 50621)	OSCAR updates	Generic Book 80 pages, updates 10% or less of book,	Yearly	
	Book Coordinate flight appendices (SSP 50621 –XX)	Flight specific documents	Flight specific OSCAR average 75	Per flight	
	Maintain the stowage website	Current Web Site Status	5 pages, Main page has 10 links plus added link for each flight, update 10% of generic information per year plus updates of active products as available (flight, increment, and weekly reports)	Monthly	
	Review and analyze manifest requests for compliance with documented on-orbit stowage allocations. Document and report results to IMT	Compliance report	Approximately 100 MRs per month	100 MRs per Month	
	Review requirements and provide technical assessments and analysis for translation of cargo between visiting vehicles and ISS and internal to ISS.	Assessment/Analysis	Approximately 2-3 per year		
	Provide hardware mock-ups	Hardware Mock-ups	Approximately 2-3; may use current mock-ups to simulate specific situations, approximately 1-2 new items will be built to support translation analysis	Per year	
	Crew Training Constraint information	Report	8 hours	Shuttle mission	
	Perform assessments and analysis of stowage configuration and available stowage volume, as required.	Assessment/Analysis	Approximately 20 categories	bi-monthly	
	Report usage of increment specific operational and R&D stowage allocations by category to IMT/RIP. Report comparison of stowage requirements vs. allocation	Reports	8 page report; 11x17 color	bi-monthly to RIP monthly to IMT	
	On-Call Support		Duration of shuttle mission	Per flight	
	Debriefs	Debrief questions	Approximately 20 questions; 5 new each increment	Per shuttle mission Per increment	
4.1.1.9.2	Lessons Learned Tactical Internal Volume Configuration (LOE) Perform integrated assessments for GFE, US and IP R&D hardware, systems upgrades, on-orbit operations, and relocations of portable equipment on the ISS. Develop briefings and present results Maintain IVC websites	Lessons learned input IVC Assessments Current Web Site Status; input to developer	2-3 items Revalidate/revise assessments, approximately 25 changes that affect assessments Approximately 2 pages with 20 links; 15 links updated per month	Monthly Monthly	
4.1.1.9.3	Plug-In Plan (CF)				
4.1.1.9.4	External Stowage Capabilities and Configuration (CF)				
	Collect data and document available and used external allocatable stowage locations using existing program engineering and CM data sources. Function as point of contact to IMTs.	External allocatable stowage report	4 page report; 10% changes	Per stage	

WORK LOAD INDICATORS

Mission Integration

SOW #	Section Title/Performance Requirements	Products/Deliverables	Approximate Magnitudes	Typical Schedule	DRD
	Obtain and document critical data including part number, serial number, lifetime, quantity and planned use for externally stowed hardware using existing ISSP engineering and CM data sources.	Critical data documentation	70% of available locations contain hardware to be tracked; 10% updates		
6.0	SAFETY AND MISSION ASSURANCE (CF)				
6.1	S&MA Management				
6.1.1	S&MA/Risk Management Plan				
	Develop and maintain a Safety & Mission Assurance/Risk Management Plan. Implement the approved plan.	Mission Assurance and Risk Management Plan	See DRD B-SA-01	Final within 30 days after contract start. If needed, updates based on annual reviews	B-SA-01
6.1.2	AS9100				
	Establish and maintain a Quality Management System	N/A	In accordance with AS9100 requirements	Task is continuous	
	Provide NASA notification of changes to certification status	If applicable, official letter to NASA Contracting Officer	One to two page letter whenever status of certification changes	Whenever applicable	
6.1.3	Audit/Surveillance				
	Provide access to data, personnel, and facilities	Data requested by NASA to support audit/surveillance	Approximately 2 weeks for 2 employees to prepare and facilitate each Audit/Surveillance	Approximately one audit/surveillance per year	
	Provide written responses to findings	If applicable, official letter that addresses Audit/Surveillance findings	Approximately 5 pages per finding	Plan delivered to NASA within 2 weeks of finding identification	
6.1.4	Mishap Investigating and Reporting				
	Report, establish recurrence control, and take corrective action	1) Mishap Reports, 2) Monthly Summary	Approximately 3 mishaps per year, 21 hours per mishap	1) For each mishap, 2) Monthly	
	Develop and maintain call tree	Call Tree with Government contacts	List comprised of names, positions, and phone numbers	Task is continuous	
	Enter mishap data into reporting system	Report generated from entering electronic data in the Incident Reporting Information System	Approximately 3 mishaps per year, 4 hours per mishap	Performed for each mishap	
6.1.5	Safety and Health				
	Develop and maintain a plan for Safety and Occupational Health to reflect policy, and implement the approved plan.	Safety and Health Plan	See DRD B-SA-02	One submittal in final form with proposal submittal, updates as required	B-SA-02
	Develop monthly metrics to measure effectiveness of the Safety and Health program	Monthly Safety and Health Metrics	Approximately 24 hours per month (see DRD B-SA-04)	Monthly	B-SA-03
	Perform risk assessment	Risk assessment	Approximately two risk assessments, 8 hours each	Assessments documented monthly	
	Perform annual self-evaluation of Safety and Health Program	Safety and Health Program Self-Evaluation	See DRD B-SA-04	Annual	B-SA-04
6.1.6	Lessons Learned				
	Capture, disseminate, and implement lessons learned	Electronic data in Lessons Learned Information System	Approximately 1 Lessons Learned per month, 4 hours each	Implementation is continuous	
6.2	S&MA Integration				
6.2.1	Change Review Recommendation				
	Review change requests and operational/design decisions	Recommendations on S&MA acceptability of changes/decisions	Approximately 107 CRs per month. Approximately 90% can be easily dismissed as N/A to MIC S&MA/PR. Applicable CRs will take approximately 2 hours each to assess and document conclusion.	Provide recommendations within allotted review time	
6.2.2	Certification of Flight Readiness (CoFR)				
	Identify flight/stage-level open work, issues, and exceptions; and certification status of manifest items	S&MA CoFR Assessment	Approximately 60 hours to perform all CoFR tasks required to support each Flight/Stage		
6.3	Program Risk				
6.3.1	Risk Management				
	Identify risks	Electronic data in IRMA	Once risk is identified, concern will be coordinated with NASA counterpart. If determined valid, 4 hours required to process/document in IRMA.	Task is continuous	
6.4	ISS Safety Program				
6.4.1	ISS System Safety Assessment				
	Perform integrated safety assessments	Hazard Reports and System Description	Approximately 20 pages each Safety Assessment and System Description Report; Assessment often requires update to existing documentation	Approximately 4 assessments for each flight/stage assessment 60 days prior to first flight	B-SA-05

WORK LOAD INDICATORS

Mission Integration

SOW #	Section Title/Performance Requirements	Products/Deliverables	Approximate Magnitudes	Typical Schedule	DRD
	Obtain program approval of safety assessments	N/A	Requires approximate 16 hours at the Safety Review Panel for each Safety assessment.	Once for every flight/stage assessment	
6.4.2	Safety Requirement Verification				
	Perform verification of the Safety requirements: Analysis, test, inspection, and/or demonstration	N/A	Approximately 20 hours per assessment for hazard control verification. Approximately 40 hours per flight/stage for Safety requirement (SSP 50021) verification.	Controls and requirements verified once for every flight/stage	
	Deliver supporting safety assessment documentation	Hazard Reports and System Description	Approximately 30 pages for each Safety assessment and system description report	3 assessments for each flight/stage assessment	B-SA-05

DATA REQUIREMENT LIST (DRL)
AND DATA REQUIREMENTS DOCUMENTS (DRD)

The following pages set out the documentation requirements of this contract, starting with a DRL, which is an index to the DRDs. Each DRD prescribes the required data product content, schedule, type, and other particulars for specific data submission requirements.

DRL Line #	DRD #	DATA TYPE	DRD TITLE	REVISED BY
	B-CM		CM – Configuration Management	
	<u>01</u>	1	Configuration Management Plan	
	B-EC		EC – Export Control	
	<u>01</u>	2	Export Control Audit Results	
	<u>02</u>	2	Export Control Plan	
	B-II		II - Russian Language and Logistics Services (RL&LS)	
	<u>01</u>	1	Language Training Curricula for NASA/JSC Contractor Programs	
	<u>02</u>	3	Language Training Shared Materials "File Cabinet"	
	<u>03</u>	3	Training Report Deliverable	
	<u>04</u>	3	Student Records	
	<u>05</u>	2	Language Program Plan for Integration with Colleagues in Russia	
	B-IT		IT - Information Technology	
	<u>01</u>	1	IT Management Plan	
	<u>02</u>	1	IT Security Plan and Reports	
	B-MI		MI - Mission Integration	
	<u>01</u>	3	User Guides for Mission Integration Database Applications System (MIDAS)	
	<u>02</u>	1	Systems Requirements Document for the Mission Integration Database Application System	
	<u>03</u>	2	Design Document for the Mission Integration Applications System (MIDAS)	
	<u>04</u>	2	Discrepancy and New Requirement Tracking for Mission Integration Database Application System	
	<u>05</u>	3	Reporting of changes to MIDAS Part Catalog Information	
	B-PC		PC - Program Control and Business Management	
	<u>01</u>	3	NF533 M/Q Cost Reporting	
	<u>02</u>	3	Cost Performance Report (CPR)	
	<u>03</u>	3	Workforce Reports	
	<u>04</u>	1	Work Breakdown Structure (WBS) and Dictionary	
	<u>05</u>	2	CPR Earned Value Methodology Report	
	<u>06</u>	2/3	Integrated Mission Integration Office Schedules	
	<u>07</u>	2/3	ISS Program Schedule Updates	
	B-PM		PM - Program Management	
	<u>01</u>	1	Mission Integration Program Management Plan	
	<u>02</u>	3	Integrated Management Review Products	
	<u>03</u>	1	Mission Integration Transition Plan	
	<u>04</u>	1/3	Performance Assessment Plan and Performance Assessment Reports	
	<u>05</u>	3	Organization Chart	
	<u>06</u>	1	Certification of Flight Readiness (CoFR) Implementation Plan	

	B-PR		PR - Procurement	
	<u>01</u>	1	Contract Close-out Plan	
	<u>02</u>	3	Wage/Salary & Fringe Benefit Data	
	<u>03</u>	2	Reprocurement Data Package	
	<u>04</u>	2	Property Financial Reporting	
	B-SA		SA-Safety Assurance	
	<u>01</u>	1	Mission Assurance and Risk Management (MA&RM) Plan	
	<u>02</u>	1	Safety & Health (S&H) Plan	
	<u>03</u>	2	Monthly Safety and Health Metrics	
	<u>04</u>	3	Safety and Health Program Self Evaluation	
	<u>05</u>	2	Hazard Reports and System Description	

Subject to the Rights in Data clause, this Data Procurement Document (DPD) sets forth the data requirements in each Data Requirements Description (DRD) and shall govern that data required by the DPD for this contract. The contractor shall furnish data defined by the DRD's listed on the Data Requirements List (DRL) by category of data. Such data shall be prepared, maintained, and delivered to NASA in accordance with the requirements set forth within this DPD. In cases where data requirements are covered by a Federal Acquisition Regulation (FAR) or NASA FAR Supplement (NFS) regulation or clause, the regulation will take precedence over the DPD, per FAR 52.215.33. NASA-Owned/Contractor-Held records shall be managed by the Contractor in accordance with Title 36 of the code of Federal Regulations, Chapter XII B, Records Management, and NMI 1440.6, NASA Records Management Program. The records shall be organized in accordance with the instructions in NHB 1442.1, NASA Uniform Files index, as applicable. The contractor shall disposition records and non-records in accordance with NHB 1441.1, NASA Retention Schedules, which has been approved by NASA and the National Archives and Records Administration (NARA). All questions on records management issues shall be directed through the Contracting Officer to the JSC Records Management Officer.

Documents included as applicable documents in this DPD are the issue specified in the Statement of Work, and form a part of the DPD to the extent specified herein. References to documents other than applicable documents in the data requirements of this DPD may sometimes be utilized. These do not constitute a contractual obligation on the contractor. They are to be used only as a possible example or to provide related information to assist the contractor in developing a response to that particular data requirement.

DESCRIPTION

This document identifies and defines the requirements and data types for information and data required under this contract.

The Data Requirement Descriptions (DRD)s define, by an individual DR, the information and data required for each deliverable document.

The data types are used to identify the approval and control required for each DR. The Data Requirements List (DRL) is an index of all the DRs by category.

Documentation submitted pursuant to this clause may incorporate references to other current approved documentation, provided the references are adequate and include such identification elements as title, document number, and approval date (where applicable). However, if the pertinent information is of relatively minor size, the contractor shall incorporate the information itself, in lieu of using a reference. The contractor shall assure that any referenced information is readily available to appropriate users of the submitted document.

DATA TYPES

For the purpose of this clause, the following information/documentation types are applicable:

Type 1 That information and documentation which requires NASA approval prior to release. Approved type 1 information and documentation shall be controlled, and deviations from or changes to the concepts, techniques, and/or requirements stated therein shall require NASA approval prior to implementation. All work under this contract covered by approved type 1 documents shall be performed in accordance with those approved documents. The Contracting Officers Technical Representative will have approval authority

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and will sign the data prior to its release. Contractually binding documents will not be implemented nor revised without contractual authorization.

Type 2 That information and documentation for which NASA reserves a time-limited right to disapprove, in whole or in part. Type 2 data shall be submitted to JSC for review not less than 30 calendar days prior to its release for use or implementation. The contractor shall clearly identify the release target date in the "submitted for review" transmittal. If the contractor has not received any comment prior to the released target date, the document may be released for appropriate use. Any NASA comment received shall be appropriately dispositioned before the document is to be used. Type 2 data may be approved by NASA prior to its submittal.

Type 3 That information and documentation which is provided to NASA for surveillance, information, review, and/or management control. This information does not require formal NASA review and approval. Information in this category would include design solutions, status, and cost/schedule reporting; analyses and test results, handbooks; and other designated lists, reports, etc.

Type 1 submissions shall be marked "TYPE 1 PRELIMINARY pending NASA approval or Type I APPROVED BY NASA, as appropriate." Additional special designations and deviations may be required on specific submissions in accordance with configuration management requirements.

Type 2 submissions shall be marked "TYPE 2 PRELIMINARY - RELEASE TARGET DATE, xx/xx/xx" or "TYPE 2 FINAL - NASA COMMENTS INCLUDED" or "TYPE 2 FINAL DOCUMENT," where NASA comments were not received.

NOTE: Documents submitted under this clause, even though directly (Type 1) or implicitly (Type 2) approved by NASA, shall not take precedence over the specifications as set out in Section C, Statement of Work.

The contractor shall normally deliver a complete revised Type 1 or Type 2 data requirement with NASA comments incorporated within 45 days of receipt of comments.

Type 3 submissions shall be marked "TYPE 3 DOCUMENT - FOR INFORMATION, SURVEILLANCE, REVIEW OR MANAGEMENT CONTROL".

NUMBER OF COPIES AND DISTRIBUTION REQUIREMENTS

The contractor shall provide one copy of each DR to the standard distribution list shown in Block 8 of the DRDs. Additional distribution shall be made as directed, in writing, by the Contracting Officer. The number of copies required will not exceed the limits set forth in Clause H-2, Printing and Duplicating, without prior Contracting Officer approval. Data Transmittal Forms will be used to confirm delivery of electronically resident DR deliverables.

ELECTRONIC FORMAT

DRDs shall be maintained electronically in the Contractor's own format, **unless a specified format is defined in the DRD. The government may define specific DRD data format to support the utilization of this data in the Management Information System.**

SUBMISSION INFORMATION

Wherever in the following DRDs under Block 6 "First Submission Date," or block 7 "Frequency of Submission," delivery is specified as at "SRR" or at any other program event, then delivery shall be required at the start or initialization of the event. Similarly when delivery is specified as a discrete amount of time before a program or project event (i.e., SRR minus 60 days) then delivery will be required that discrete amount of time before the start of the program or project event. In addition, whenever delivery is specified as after an event, (i.e., SRR plus 30 days) delivery should be required after the end of the event.

NNJ04AA02C**(SECTION J-1 Appendix I) Mission Integration Contract****1 of 1**

APPENDIX I**GOVERNMENT APPLICATIONS**

NASA will provide access to these applications:

Application Name	Description
Action Tracking Application (ATA)	The Action Tracking Application (ATA) is used to track program actions
Crew Language Training Metrics	Intranet based database used for collecting crew training data
COSMOS	COSMOS is used to track status of change requests/directives for ISS
Common Schedules Database	Use for collection of schedule data for ISSP
Integrated Risk Management Application (IRMA)	Application used to identify, status and track programmatic risks, watch items, and cost threats
Electronic Document Management System (EDMS)	Application which will house the program authorized library

DATA REQUIREMENT LIST (DRL)
AND DATA REQUIREMENTS DOCUMENTS (DRD)

The following pages set out the documentation requirements of this contract, starting with a DRL, which is an index to the DRDs. Each DRD prescribes the required data product content, schedule, type, and other particulars for specific data submission requirements.

DRL Line #	DRD #	DATA TYPE	DRD TITLE	REVISED BY
	B-CM		CM – Configuration Management	
	<u>01</u>	1	Configuration Management Plan	
	B-EC		EC – Export Control	
	<u>01</u>	2	Export Control Audit Results	
	<u>02</u>	2	Export Control Plan	
	B-II		II - Russian Language and Logistics Services (RL&LS)	
	<u>01</u>	1	Language Training Curricula for NASA/JSC Contractor Programs	
	<u>02</u>	3	Language Training Shared Materials "File Cabinet"	
	<u>03</u>	3	Training Report Deliverable	
	<u>04</u>	3	Student Records	
	<u>05</u>	2	Language Program Plan for Integration with Colleagues in Russia	
	B-IT		IT - Information Technology	
	<u>01</u>	1	IT Management Plan	
	<u>02</u>	1	IT Security Plan and Reports	
	B-MI		MI - Mission Integration	
	<u>01</u>	3	User Guides for Mission Integration Database Applications System (MIDAS)	
	<u>02</u>	1	Systems Requirements Document for the Mission Integration Database Application System	
	<u>03</u>	2	Design Document for the Mission Integration Applications System (MIDAS)	
	<u>04</u>	2	Discrepancy and New Requirement Tracking for Mission Integration Database Application System	
	<u>05</u>	3	Reporting of changes to MIDAS Part Catalog Information	
	B-PC		PC - Program Control and Business Management	
	<u>01</u>	3	NF533 M/Q Cost Reporting	
	<u>02</u>	3	Cost Performance Report (CPR)	
	<u>03</u>	3	Workforce Reports	
	<u>04</u>	1	Work Breakdown Structure (WBS) and Dictionary	
	<u>05</u>	2	CPR Earned Value Methodology Report	
	<u>06</u>	2/3	Integrated Mission Integration Office Schedules	
	<u>07</u>	2/3	ISS Program Schedule Updates	
	B-PM		PM - Program Management	
	<u>01</u>	1	Mission Integration Program Management Plan	
	<u>02</u>	3	Integrated Management Review Products	
	<u>03</u>	1	Mission Integration Transition Plan	
	<u>04</u>	1/3	Performance Assessment Plan and Performance Assessment Reports	
	<u>05</u>	3	Organization Chart	
	<u>06</u>	1	Certification of Flight Readiness (CoFR) Implementation Plan	

	B-PR		PR - Procurement	
	01	1	Contract Close-out Plan	
	02	3	Wage/Salary & Fringe Benefit Data	
	03	2	Reprocurement Data Package	
	04	2	Property Financial Reporting	
	B-SA		SA-Safety Assurance	
	01	1	Mission Assurance and Risk Management (MA&RM) Plan	
	02	1	Safety & Health (S&H) Plan	
	03	2	Monthly Safety and Health Metrics	
	04	3	Safety and Health Program Self Evaluation	
	05	2	Hazard Reports and System Description	

Subject to the Rights in Data clause, this Data Procurement Document (DPD) sets forth the data requirements in each Data Requirements Description (DRD) and shall govern that data required by the DPD for this contract. The contractor shall furnish data defined by the DRD's listed on the Data Requirements List (DRL) by category of data. Such data shall be prepared, maintained, and delivered to NASA in accordance with the requirements set forth within this DPD. In cases where data requirements are covered by a Federal Acquisition Regulation (FAR) or NASA FAR Supplement (NFS) regulation or clause, the regulation will take precedence over the DPD, per FAR 52.215.33. NASA-Owned/Contractor-Held records shall be managed by the Contractor in accordance with Title 36 of the code of Federal Regulations, Chapter XII B, Records Management, and NMI 1440.6, NASA Records Management Program. The records shall be organized in accordance with the instructions in NHB 1442.1, NASA Uniform Files index, as applicable. The contractor shall disposition records and non-records in accordance with NHB 1441.1, NASA Retention Schedules, which has been approved by NASA and the National Archives and Records Administration (NARA). All questions on records management issues shall be directed through the Contracting Officer to the JSC Records Management Officer.

Documents included as applicable documents in this DPD are the issue specified in the Statement of Work, and form a part of the DPD to the extent specified herein. References to documents other than applicable documents in the data requirements of this DPD may sometimes be utilized. These do not constitute a contractual obligation on the contractor. They are to be used only as a possible example or to provide related information to assist the contractor in developing a response to that particular data requirement.

DESCRIPTION

This document identifies and defines the requirements and data types for information and data required under this contract.

The Data Requirement Descriptions (DRD)s define, by an individual DR, the information and data required for each deliverable document.

The data types are used to identify the approval and control required for each DR. The Data Requirements List (DRL) is an index of all the DRs by category.

Documentation submitted pursuant to this clause may incorporate references to other current approved documentation, provided the references are adequate and include such identification elements as title, document number, and approval date (where applicable). However, if the pertinent information is of relatively minor size, the contractor shall incorporate the information itself, in lieu of using a reference. The contractor shall assure that any referenced information is readily available to appropriate users of the submitted document.

DATA TYPES

For the purpose of this clause, the following information/documentation types are applicable:

Type 1 That information and documentation which requires NASA approval prior to release. Approved type 1 information and documentation shall be controlled, and deviations from or changes to the concepts, techniques, and/or requirements stated therein shall require NASA approval prior to implementation. All work under this contract covered by approved type 1 documents shall be performed in accordance with those approved documents. The Contracting Officers Technical Representative will have approval authority

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and will sign the data prior to its release. Contractually binding documents will not be implemented nor revised without contractual authorization.

Type 2 That information and documentation for which NASA reserves a time-limited right to disapprove, in whole or in part. Type 2 data shall be submitted to JSC for review not less than 30 calendar days prior to its release for use or implementation. The contractor shall clearly identify the release target date in the "submitted for review" transmittal. If the contractor has not received any comment prior to the released target date, the document may be released for appropriate use. Any NASA comment received shall be appropriately dispositioned before the document is to be used. Type 2 data may be approved by NASA prior to its submittal.

Type 3 That information and documentation which is provided to NASA for surveillance, information, review, and/or management control. This information does not require formal NASA review and approval. Information in this category would include design solutions, status, and cost/schedule reporting; analyses and test results, handbooks; and other designated lists, reports, etc.

Type 1 submissions shall be marked "TYPE 1 PRELIMINARY pending NASA approval or Type I APPROVED BY NASA, as appropriate." Additional special designations and deviations may be required on specific submissions in accordance with configuration management requirements.

Type 2 submissions shall be marked "TYPE 2 PRELIMINARY - RELEASE TARGET DATE, xx/xx/xx" or "TYPE 2 FINAL - NASA COMMENTS INCLUDED" or "TYPE 2 FINAL DOCUMENT," where NASA comments were not received.

NOTE: Documents submitted under this clause, even though directly (Type 1) or implicitly (Type 2) approved by NASA, shall not take precedence over the specifications as set out in Section C, Statement of Work.

The contractor shall normally deliver a complete revised Type 1 or Type 2 data requirement with NASA comments incorporated within 45 days of receipt of comments.

Type 3 submissions shall be marked "TYPE 3 DOCUMENT - FOR INFORMATION, SURVEILLANCE, REVIEW OR MANAGEMENT CONTROL".

NUMBER OF COPIES AND DISTRIBUTION REQUIREMENTS

The contractor shall provide one copy of each DR to the standard distribution list shown in Block 8 of the DRDs. Additional distribution shall be made as directed, in writing, by the Contracting Officer. The number of copies required will not exceed the limits set forth in Clause H-2, Printing and Duplicating, without prior Contracting Officer approval. Data Transmittal Forms will be used to confirm delivery of electronically resident DR deliverables.

ELECTRONIC FORMAT

DRDs shall be maintained electronically in the Contractor's own format, **unless a specified format is defined in the DRD. The government may define specific DRD data format to support the utilization of this data in the Management Information System.**

SUBMISSION INFORMATION

Wherever in the following DRDs under Block 6 "First Submission Date," or block 7 "Frequency of Submission," delivery is specified as at "SRR" or at any other program event, then delivery shall be required at the start or initialization of the event. Similarly when delivery is specified as a discrete amount of time before a program or project event (i.e., SRR minus 60 days) then delivery will be required that discrete amount of time before the start of the program or project event. In addition, whenever delivery is specified as after an event, (i.e., SRR plus 30 days) delivery should be required after the end of the event.

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: Configuration Management Plan 1b. Data Type: 1	2. Date of Current Version 01/01/04	3a. DRD No. B-CM-01	3b. RFP/Contract No. NNJ04AA02C
4. Use (Define need for, intended use of, and/or anticipated results of data) This plan is prepared by the supplier to describe the assignment of responsibility organizationally and the procedures used in accomplishment of the specific configuration management requirements as stated in the SOW and SSP 41170.			5. DRD Category ___ Technical _X_ Administrative ___ SR&QA
6. References (SOW, Clause, etc.) SOW Section 1.3		7. Interrelationships (e.g., with other DRDs) N/A	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

SCOPE: This CM plan defines the requirements, responsibilities, and procedures for the CM system pursuant to SSP 41170 and as it applies to this contract.

CONTENT: The CM plan shall address, as a minimum, the following:

A. Management Organization, (including reference documents)

1. Identification, Relationships and Integration of contractor's proposed organization
2. Responsibility and authority for CM including roles in configuration control boards and technical reviews
3. Interfaces between contractor's CM organization and NASA, Subcontractors, and other contractor's/contracts.
4. Training plans

B. Configuration Control

1. Establishment of internal configuration and contractual baselines
2. Implementation of Internal and NASA configuration control
3. Support to configuration control boards and processes
4. Identification of processes to control changes, deviations, and waivers to program baselines (both class I and class II)
5. Subcontractor and vendor control
6. Systems and tools

C. Configuration Verification\Audits

1. Audit conduct, policies, procedures, documentation, access, and support
2. Processes, plans, schedules for internal CM audits and subcontractor CM audits

D. Data Management

1. Development, approval, release and submittal of configuration data/documentation (including drawings) in relation to program and contractual events (DRD's, technical reviews, Acceptance reviews, COFR, etc.)
2. Plan for subcontractor data management deliveries/control and access
3. Establishment and operation of Engineering Release Unit and CM receipt desk
4. Process for Documentation control (i.e., DCNs)
5. Retention of historical data
6. Systems and tools

FORMAT: Format supported by PALS,

9. OPR: OL2/NASA ISS Configuration Management Office

10. FIRST SUBMISSION DATE: Draft Delivered with Contract Proposal

Frequency Of Submission: Final 60 days after contract award.

Additional Submissions: Updated if major systems or processes are changed.

11. MAINTENANCE: Reviewed annually to insure accuracy.

12. COPIES/DISTRIBUTION:

1 record (hard copy): OL2/Data Management

1 copy (electronic): Program authorized repository (e.g. PALS, or equivalent.)

13. REMARKS:

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Export Control Audit Results	2. Date of Current Version 1/1/04	3a. DRD No. B-EC-01	3b. RFP/Contract No. NNJ04AA02C
1b. Data Type: 2			
4. Use (Define need for, intended use of, and/or anticipated results of data) To provide insight into the Contractor's Export Control processes			5. DRD Category <input type="checkbox"/> Technical <input checked="" type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References (SOW, Clause, etc.) NFS 1852.225-70 and clause H.19, SOW 1.5.2.		7. Interrelationships (e.g., with other DRDs)	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

SCOPE: Audits should include a thorough examination of all export control processes associated with this contract, areas for improvement (if any), and corrective action plans for identified areas of improvement. Affected subcontractors are required to do their own self-audits and report the results of the audit to NASA through the contractor. Prior to audit completion, inclusion on the audit process thru informal statuses to the JSC Export Services Team or Center Export Administrator is optional and might prove useful in the success of this effort.

CONTENT:

- (a) Define your current audit processes
- (b) Document the export control processes audited and audit findings
- (c) Based on audit findings, the contractor/subcontractor shall include corrective action plans for any processes identified for improvements and notification of when the correction of any non-conformances has been completed.

FORMAT: a, b, c, & d must be submitted to the Center Export Administrator (CEA) at the end of each fiscal year for review & approval and be in an acceptable format (e.g. Microsoft Word, Excel, etc.) that is compatible with the Program authorized repository

9. OPR: JSC Export Control Office or Center Export Administrator

10. FIRST SUBMISSION DATE: September 30, 2004

Frequency Of Submission: annually, at the end of each fiscal year

Additional Submissions:

11. MAINTENANCE: The document shall be maintained electronically.

12. COPIES/DISTRIBUTION:

1 original/record (hard copy): OL/Data Management

1 electronic copy: to a Program authorized repository (PALS or equivalent)

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: Export Control Plan (ECP) 1b. Data Type: 2	2. Date of Current Version <p style="text-align: center;">01/01/04</p>	3a. DRD No. <p style="text-align: center;">B-EC-02</p>	3b. RFP/Contract No. <p style="text-align: center;">NNJ04AA02C</p>
4. Use (Define need for, intended use of, and/or anticipated results of data) Document the contractor's approach for export control.			5. DRD Category <input type="checkbox"/> Technical <input checked="" type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References (SOW, Clause, etc.) FAR, NFS, and Contract Clause H.1 and H.15		7. Interrelationships (e.g., with other DRDs)	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

SCOPE: The plan shall describe all export control activities related to the performance of contract requirements. The plan shall include procedures for issuance of a quarterly report listing all exports affected for the subject contract on behalf of NASA by the contractor during the reporting quarter. The list is to include information describing the item exported, licenses (if acquired), exemptions, and classifications on those exports.

CONTENT: The contractor shall prepare and submit an Export Control Plan (ECP), describing the contractor's planned approach for accomplishing contract functions while adhering to export laws, regulations and directives.

FORMAT: Contractor format is acceptable.

9. OPR: TA-E

10. FIRST SUBMISSION DATE: Draft Plan with in 30 days after contract award. Final contractor approved Plan with in 120 days after contract award.

Frequency Of Submission: Annually
Additional Submissions: As Requested

11. MAINTENANCE: The plan shall be reviewed annually to ensure accuracy. Any updates to the plan require a resubmission of the plan.

12. COPIES/DISTRIBUTION:

1 Original/record (hard copy): OL/Data Management
1 Electronic copy: to a Program authorized repository (PALS or equivalent)

13. REMARKS: The ECP Plan requires approval of the Center Export Administrator (CEA). The plan shall be submitted within 30 days after contract award in draft form and revised to provide a final plan for approval within 120 days after contract start. The plan shall be reviewed at least annually thereafter and updated as required.

NASA Data Management will send delivery notification to the following:

Contracting Officer
 COTR
 Center Export Admin.

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Language Training Curricula for NASA/JSC Contractor Programs 1b. Data Type: 1	2. Date of Current Version January 2003	3a. DRD No. B-II-01	3b. RFP/Contract No. NNJ04AA02C
4. Use (Define need for, intended use of, and/or anticipated results of data) For use by NASA technical personnel to identify and review curricula programs			5. DRD Category ___ Technical _x Administrative ___ SR&QA
6. References (SOW, Clause, etc.) 1.5.1.3		7. Interrelationships (e.g., with other DRDs)	

8. PREPARATION INFORMATION:

Language training curricula shall be proficiency oriented and communicative in nature, and focus on relevant thematic content areas in two broad categories: "every day" subjects and technical subjects. These categories will be further broken down into subject areas relevant to the student's course of study. For example, astronauts assigned to ISS flights might study Soyuz systems, Russian cosmonauts might study Shuttle systems, and Center Wide students might study ways of using transportation in Moscow; all students need a mix of technical and every day thematic content. Thematic content will be furnished to NASA Language Project Managers for approval, additions, or deletions. Further, curricula will provide language content in the form of specific pronunciation and grammatical areas for each level of Russian or English course or student, and allow for flexibility in awareness of student strategies and tactics.

Curricula will include specific skills such as oral communication, listening comprehension, reading, and writing which will occur as situated content. Curricula will specify major teaching methods or techniques as they relate to communicative process, and indicate appropriate points for assessment. Curricula will be written such that they are consistent with current, generally accepted curricula theory in the field of language teaching.

The language curricula shall move the students at an accepted pace of language acquisition standard among U.S. government programs (as indicated in the ASTM standards) while accounting for attrition caused by the part-time language study of NASA personnel and contractors, and other factors such as language learning aptitude. As the language training programs administered by the Contractor are established and materials become available, they must also be incorporated in the curricula. Once curriculum(s) are established and approved by the government, the Contractor shall keep them current with program needs.

The language training curricula shall provide for students (either tutorial or group sessions) at all levels of the ILR standards and definitions from level 0 through level 2+ for languages other than English, and for all levels from 0 through 8 of the MELT standards for English. Curricula will support students who reach 2+ or SPL 8 in maintaining that level of language proficiency, while allowing students with sufficient time and ability to progress via individually designed programs of study.

Designing such curricula should not be interpreted as an indication by the Contractor of a "cut off" score or ultimate proficiency goal for crewmembers, but rather a feasible and flexible curricular design within the NASA training constraints. The curricula shall be delivered to NASA in English. Further explanation of the curricula design may be provided at the request of a Project Manager and delivered orally at a joint meeting of the Project Managers and the Contractor curricula designers.

Updates:

NASA Project Managers shall approve updates to the overall language-training curriculum, but individual lesson plans shall be adjusted to specific needs of individual students as necessary.

Recipient:

The NASA Language Project Managers will receive and approve the completed curriculums, and subsequent upgrades to those products.

FORMAT: Electronic MS Office 97 or higher in English

9. OPR: AH and DT

10. FIRST SUBMISSION DATE: Notify NASA within 30 days of contract start of any planned changes.

Frequency Of Submission: As required

Additional Submissions: As required

11. MAINTENANCE: Annually or as required

12. COPIES/DISTRIBUTION:

1 record (hard copy): OL2/Data Management

1 copy (electronic): Each NASA OPR

13. REMARKS: n/a

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Language Training Shared Materials "File Cabinet"	2. Date of Current Version January 2003	3a. DRD No. B-II-02	3b. RFP/Contract No. NNJ04AA02C
1b. Data Type: Type 3			
4. Use (Define need for, intended use of, and/or anticipated results of data) For use by NASA technical personnel to identify and review shared materials for language training			5. DRD Category ___ Technical _x Administrative ___ SR&QA
6. References (SOW, Clause, etc.) 1.5.1.3		7. Interrelationships (e.g., with other DRDs)	

8. PREPARATION INFORMATION:

A language training storage mechanism for all MIC administered NASA language-training programs shall be maintained by the Contractor electronically on a NASA provided server, and in hard copy if the material is not suitable for electronic storage. The storage mechanism shall include all syllabi, indices of material locations (e.g. videotapes, periodicals), lessons, and instructional materials that lend themselves to storage. The storage mechanism must be accessible by all faculty and language program managers, and authors of materials must be identified in order of origination (e.g. the first initials are the originator, the next set to indicate someone made significant changes, etc.). Maintenance and updates to the syllabi shall be filed for each tutorial student and each group instruction opportunity and training period.

Frequency:

Updates to the archive shall be continuous as the faculty develops new materials for instruction.

FORMAT: As applicable

9. OPR: AH and DT

10. FIRST SUBMISSION DATE:

Frequency Of Submission: Syllabi delivered for each tutorial student or group training period

Additional Submissions: As required

11. MAINTENANCE: as needed

12. COPIES/DISTRIBUTION:

1 record (hard copy materials): JLEC

1 copy (electronic): JLEC NASA server

13. REMARKS: n/a

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Training Report Deliverable	2. Date of Current Version January 2004	3a. DRD No. B-II-03	3b. RFP/Contract No. NNJ04AA02C
1b. Data Type: 3			
4. Use (Define need for, intended use of, and/or anticipated results of data) For use by NASA technical personnel to evaluate language training progress			5. DRD Category ___ Technical __x Administrative ___ SR&QA
6. References (SOW, Clause, etc.) SOW paragraph 1.5.1.3		7. Interrelationships (e.g., with other DRDs)	

8. PREPARATION INFORMATION:

The report shall cover the following:

- Any student feedback not included on evaluation forms.
- A table showing the location of the following records: syllabi (electronic and paper copies); lesson plans (electronic monthly samples and full paper copies of each contact session); the electronically stored Student Progress Matrix which indicates the number of hours attended by each student for each month and their current and former assessment levels.
- Specific topics as directed by the NASA Language Project Managers.
- Areas covered in the current FYI LT Status report, which are: accomplishments/progress, issues, current events, short term goals, long term goals, and corrective actions.
- Student attendance rosters and evaluations.

FORMAT: As defined in #8

9. OPR: AH and DT

10. FIRST SUBMISSION DATE: March 31, 2004

Frequency Of Submission: quarterly

Additional Submissions: as requested

11. MAINTENANCE: weekly

12. COPIES/DISTRIBUTION:

1 record (hard copy materials): to each NASA OPR

1 copy (electronic materials): JLEC NASA Server and each NASA OPR

13. REMARKS: n/a

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Student Records	2. Date of Current Version January 2004	3a. DRD No. B-II-04	3b. RFP/Contract No. NNJ04AA02C
1b. Data Type: 3			
4. Use (Define need for, intended use of, and/or anticipated results of data) For use by NASA technical personnel to identify and review student progress			5. DRD Category ___ Technical _x Administrative ___ SR&QA
6. References (SOW, Clause, etc.) 1.5.1.3		7. Interrelationships (e.g., with other DRDs)	

8. PREPARATION INFORMATION:

The Contractor shall maintain formal student records for all students being instructed by Contractor personnel. Student records shall include a folder or binder with each class designation or student name. In the folder there will be lesson plans for each contact hour indicating the instructor, active and inactive course syllabi (in the case of long term students, there may be more than one inactive folder and one active folder). There may also be selected handouts and homework assignments. The contact hours record shall be maintained in the Student Progress Matrix, which will be available electronically. Records of informal assessments performed by Contractor personnel with written comments will be maintained and will be organized by student or class.

FORMAT: Electronic or hardcopy as defined in #8

9. OPR: AH/NASA Language Project Manager and DT

10. FIRST SUBMISSION DATE:

Frequency Of Submission: as requested by NASA OPR

Additional Submissions:

11. MAINTENANCE: within 1 week of class attendance

12. COPIES/DISTRIBUTION:

1 record (hard copy): JLEC Files

1 copy (electronic): JLEC NASA Server

13. REMARKS: n/a

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Language Program Plan for Integration with Colleagues in Russia 1b. Data Type: 2	2. Date of Current Version January 2004	3a. DRD No. B-II-05	3b. RFP/Contract No. NNJ04AA02C
4. Use (Define need for, intended use of, and/or anticipated results of data) For use by NASA technical personnel to identify and review the language program			5. DRD Category <input type="checkbox"/> Technical <input checked="" type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References (SOW, Clause, etc.) 1.5.1.3	7. Interrelationships (e.g., with other DRDs) Language Training Curricular for NASA/JSC Contractor Programs (DRD-B-II-02)		

8. PREPARATION INFORMATION:

A Language Training Plan for integration of the Contractor's Russian language training programs in Russia and the Contractor's Russian language training program at NASA shall be established and maintained by the Contractor. The position of curricula integrator, or Russian Language Training Liaison, shall be established. The Contractor will send staff members including the Russian Language Training Liaison to Russia, as needed, minimum once per year. Final integration and use of combined materials and curricula among Russian teachers employed by the Contractor shall proceed over the next year.

The Liaison, and other administrative personnel and/or instructors as deemed necessary by the Contractor, shall travel to Russia for the purpose of facilitating the integration of the Contractor's NASA Russian Program and Russian programs in Star City not associated with the Contractor. The Contractor will evidence this facilitation by documenting meetings and discussions with Russian teaching colleagues and the results of those events, including any shared curricula, lessons, or materials that may be agreed upon.

The Contractor shall work to facilitate additional integrated English language training with GCTC and Energia/TsUP. Assuming that NASA arranges this with the Russian side, this will be achieved by working intensively with the ESL instructors at GCTC, sharing materials, and otherwise working to integrate the programs. Additionally, the contractor will send staff members to provide assistance to the existing English program at TsUP in the form of materials and consulting (again assuming that NASA arranges this with the Russian side). The Contractor shall work with the Russian and English teachers not employed by the Contractor in order to facilitate the sharing of materials, the development of coordinated syllabi and lessons for advanced students, and the development of the advanced student curriculum. The Contractor will evidence this shared work by means of records regarding student progress and areas for improvement that have been sent to colleagues in Russia with whom students are shared.

The NASA Language Project Managers shall evaluate progress and determine reasonable deadlines for delivery and use of the integrated language-training program between the Contractor NASA programs and Contractor language programs in Russia. They will also evaluate the progress of the Russian Training Liaison in working to facilitate an integrated program between Contractor NASA programs and non-Contractor Russian language programs, and the progress of the Contractor English as a Second Language administrator and instructors in working to facilitate an integrated program with non-Contractor English language programs. All protocol agreements between the Russian and American sides will be signed by the NASA Language Training Project Manager(s). The completed, integrated Contractor language training programs shall be incorporated in the language curricula (DRD-B-II-02).

FORMAT: Electronic preferred

9. OPR: AH and DT

10. FIRST SUBMISSION DATE: within 30 days of contract start

Frequency Of Submission: annual

Additional Submissions:

11. MAINTENANCE: Annual

12. COPIES/DISTRIBUTION:

1 record (hard copy): To each NASA OPR

1 record (electronic): To JLEC NASA Server

13. REMARKS:

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: IT Management Plan	2. Date of Current Version 12/02/02	3a. DRD No. B-IT-01	3b. RFP/Contract No. NNJ04AA02C
1b. Data Type: 1	4. Use (Define need for, intended use of, and/or anticipated results of data) The Contractor shall provide plans to coordinate and execute all technical and administrative tasks for all management activities required to satisfy the requirements of this contract.		5. DRD Category ___ Technical _x Administrative ___ SR&QA
6. References (SOW, Clause, etc.) 1.4.1		7. Interrelationships (e.g., with other DRDs)	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

SCOPE:

The Management Plan shall include the plans for coordination and execution all IT tasks.

CONTENT:

The Management Plan shall be an umbrella document, which encompasses and integrates all IT management activities. As a minimum, the Management Plan shall cover:

1. The significant policies and plans of all aspects of reportable IT.
2. Levels of approvals.
3. Flow of authority.
4. External interfaces with the Government and other contractors.
5. The relationship between and integration of IT DRDs to the overall management of the IT content.

FORMAT: Contractor supplied format, compatible with ISS document standards

9. OPR: MIO

10. FIRST SUBMISSION DATE: Within 30 days of contract start

Frequency Of Submission: as needed

Additional Submissions: The Management Plan shall be updated to reflect changes that occur after its initial publication.

11. MAINTENANCE:

12. COPIES/DISTRIBUTION:

Data Transmittal form (DTF) notification:

OL/Data Management

1 Copy

Original/record (hard copy) to the following:

Contracting Officer

1 Copy

Contracting Officer's Technical Representative (COTR)

1 Copy

Electronic copy: to a Program authorized repository (PALS or equivalent)

13. REMARKS:

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Information Technology (IT) Security Plan and Reports 1b. Data Type: 1	2. Date of Current Version 01/01/04	3a. DRD No. B-IT-02	3b. RFP/Contract No. NNJ04AA02C
4. Use (Define need for, intended use of, and/or anticipated results of data) To meet IT security reporting requirements			5. DRD Category <input checked="" type="checkbox"/> Technical <input type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References (SOW, Clause, etc.) SOW 1.4.1 Clause I.5 NPG 2810.1 NASA IT Security Program JPG 2810.1 JSC IT Security Handbook NASA PAN 03-16 System Administrator Security Certification Program		7. Interrelationships (e.g., with other DRDs) B-IT-01	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

SCOPE: All contracts that purchase, lease, network to, or otherwise utilize government-funded IT (as defined by the Clinger-Cohen Act of 1996) must implement the SSP50222 ISS Program Capital Investment Process.

CONTENT:

SECURITY PLAN

This plan shall contain the overall security policies, as required, for each system and application in a form compatible with the NASA Information Technology System (ITS) Security Program and the security and policies of the Center at which the work is being performed. For work being performed at JSC or at remote contractor sites not located at a NASA field center, the plan will comply to JPG 2810.1 JSC IT Security Handbook.

SECURITY STATUS REPORT

This report shall document the security status of all ITS, including any suspected security violations or infractions.

INFORMATION ON EMPLOYEES IN SENSITIVE AIS POSITIONS/ASSIGNMENTS REPORT

The Information on Employees in Sensitive ITS Positions/Assignments Report shall provide information for personnel screening as required by the JPG 2810.1.

SYSTEM ADMINISTRATOR SECURITY CERTIFICATION PROGRAM:

This Agency-wide program applies to all lead system administrators administering systems on NASA IP address space.

All individuals who perform tasks as a system administrator or have authority to perform tasks normally performed by system administrator shall be required to demonstrate knowledge appropriate

to those tasks. This demonstration, referred to as the NASA System Administrator Security Certification, is a NASA funded two-tier assessment to verify that system administrators are able to --

1. Demonstrate knowledge in system administration for the operating systems for which they have responsibility.
2. Demonstrate knowledge in the understanding and application of Network and Internet Security.

Certification is granted upon achieving a score above the certification level on both an Operating System test and the Network and Internet Security Test. The Certification earned under this process will be valid for three years. The criteria for this skills assessment has been established by the NASA Chief Information Officer. The objectives and procedures for this certification can be obtained by contacting the IT Security Awareness and Training Center at (216) 433-2063.

A system administrator is one who provides IT services, network services, files storage, web services, etc. to someone else other than themselves and takes or assumes the responsibility for the security and administrative controls of that service or machine. A lead system administrator has responsibility for information technology security (ITS) for multiple computers or network devices represented within a system; ensuring all devices assigned to them are kept in a secure configuration (patched/mitigated); and ensuring that all other system administrators under their lead understand and perform ITS duties. An individual that has full access or arbitrative rights on a system or machine that is only servicing themselves does not constitute a "system administrator" since they are only providing or accepting responsibility for their system. An individual only servicing their own IT system, is not required to obtain a System Administrator Certification.

Reference Documents:

The IT Security requirements are documented in NPG and JPG 2810.1 (for JSC and remote contract sites)

FORMAT: As defined in the JPG 2810.1

9. OPR: OL/Chief Information Officer

10. FIRST SUBMISSION DATE: Within thirty (30) days after contract award.

Frequency Of Submission: As defined in JPG 2810.1

Additional Submissions: As defined in JPG 2810.1

11. MAINTENANCE: As defined in the JPG 2810.1

12. COPIES/DISTRIBUTION:

1 original/record (hard copy): OL/ Data Management

1 electronic copy: Program Authorized Repository

13. REMARKS: The final plan, as approved by the Contracting Officer, shall be incorporated in the contract as Attachment J-6

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: User Guides for Mission Integration Database Applications System (MIDAS)	2. Date of Current Version 1/23/03	3a. DRD No. B-MI -01	3b. RFP/Contract No. NNJ04AA02C
1b. Data Type: 3 4. Use (Define need for, intended use of, and/or anticipated results of data) User guides are required for major functional areas of the software tool for training of new users and reference purposes for all users.			5. DRD Category <input checked="" type="checkbox"/> Technical <input type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References (SOW, Clause, etc.) SOW paragraph, 4.1.1.3.4		7. Interrelationships (e.g., with other DRDs) DRD B-MI-02: Requirements documents for the Mission Integration Database Applications System (MIDAS) DRD B-MI-03: Design document for the Mission Integration Database Applications System (MIDAS)	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

SCOPE:

User guides for each major functional area of MIDAS will be distributed to all MIDAS users of that function and be available upon request for new users. User guide should provide sufficient information for a new user to understand the use of the software tool.

CONTENT:

User guide(s) will provide a description of the user interface for the particular function being described. All capabilities of the specific function should be described from the user's standpoint. All information fields accessible to the user should be defined, along with the users access capability (read only or read/write). User guides should include the following areas and any new functions added to MIDAS:

- MIDAS User Guide – General user information across MIDAS tool.
- MIDAS Flight Lead Users Guide - Describes the functions available in MIDAS to support manifest development and maintenance.
- Manifest Request Processing Users Guide – Describes the functions available to support the submission and processing of manifest requests.
- Cargo Integration Users Guide – Describes the functions applicable to the Cargo Integration function
- MIDAS Anonymous WEB Page Information – Describes the reporting functions provide for users who access the tool without a defined user account.
- MIDAS Part Catalog Users Guide – Describes the functions available for use of the MIDAS part catalog tables.
- MRTS Loader File Description/Sample Loader – Describes the method and format for creating external files which can be loaded into the Manifest Request function for automatic generation of a request.
- IMS/HAZARD/TOXICITY Users Guide – Describes the function applicable to users who provide either IMS barcode information or hazard/toxicity information to the tool
- Requirements Request Users guide – Describes the function used to support submission and processing of mission requirements.

- Bar Code, Inventory Tracking System Users Guide – Describes the functions used for submission of bar code label requests, processing of requests, and acquisition of bar codes and serial number information.

FORMAT: Electronically maintained and available via the MIDAS web interface and in PALS.

9. OPR: OC

10. FIRST SUBMISSION DATE: with first revision to tool

Frequency Of Submission: Document(s) should be updated when new requirements are implemented, design changes occur, or to correct deficiencies in the guide.

Additional Submissions:

11. MAINTENANCE: As required when new requirements are implemented, design changes occur, or deficiencies need correction.

12. COPIES/DISTRIBUTION:

1 original/record copy to OL/ Data Management

1 electronic copy to ISS Program authorized repository (PALS or equivalent)

13. REMARKS:

Notification of updates should be sent to OPR and all users of the affected functions.

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: Requirements Document for the Mission Integration Database Applications System (MIDAS)	2. Date of Current Version 1/23/03	3a. DRD No. B-MI-02	3b. RFP/Contract No. NNJ04AA02C
1b. Data Type: 1			5. DRD Category <input checked="" type="checkbox"/> Technical <input type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
4. Use (Define need for, intended use of, and/or anticipated results of data) Document will be used to define the functional requirements for the MIDAS. The document will be used to define software changes authorized by the ISS program.			
6. References (SOW, Clause, etc.) SOW paragraph, 4.1.1.3.4		7. Interrelationships (e.g., with other DRDs) DRD B-MI-01: User Guides for Mission Integration Database Applications System (MIDAS) DRD B-MI-03: Design document for the Mission Integration Database Applications System (MIDAS)	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

SCOPE:

Document should include functionality of all of the MIDAS application.

CONTENT:

Document shall contain all software requirements implemented in the MIDAS tool. Document shall also contain all requirements authorized for delivery by NASA, but not yet implemented. Requirements shall be organized by functional area within the tool. The document shall indicate when each requirement was implemented or is planned for implementation (if scheduled) using a software version number or similar indicator.

FORMAT: Electronically maintained and available in PALS (or PALS replacement).

9. OPR: OC

10. FIRST SUBMISSION DATE: N/A

Frequency Of Submission: Document shall be updated & submitted at least once per major software release

Additional Submissions:

11. MAINTENANCE: Existing document should be maintained or replacement document produced.

12. COPIES/DISTRIBUTION:

1 original/record copy to OL /Data Management

1 electronic copy to ISS Program authorized repository (PALS or equivalent)

13. REMARKS:

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: Design Document for the Mission Integration Database Applications System (MIDAS) 1b. Data Type: 2	2. Date of Current Version 1/23/03	3a. DRD No. B- MI-03	3b. RFP/Contract No. NNJ04AA02C
4. Use (Define need for, intended use of, and/or anticipated results of data) Document will be used to define the implementation and software technology used to develop the application.			5. DRD Category <input checked="" type="checkbox"/> Technical <input type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References (SOW, Clause, etc.) SOW paragraph, 4.1.1.3.4		7. Interrelationships (e.g., with other DRDs) DRD B-MI-01: User Guides for Mission Integration Database Applications System (MIDAS) DRD B-MI-02: Requirements document for the Mission Integration Database Applications System (MIDAS)	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

SCOPE:

Document should cover all functionality of the MIDAS tool.

CONTENT:

Document shall describe the method and techniques used by the software developers to implement the defined requirements for the application. Sufficient detail shall be provided to allow new software developers to understand the implementation used.

FORMAT: Electronically maintained and available in PALS.

9. OPR: OC

10. FIRST SUBMISSION DATE: with first software release

Frequency Of Submission: at least once per major software release

Additional Submissions:

11. MAINTENANCE: as needed

12. COPIES/DISTRIBUTION:

1 original/record copy to OL Data Management

1 electronic copy to ISS Program Office repository (PALS or equivalent)

13. REMARKS:

Weekly Report for the week ending: 2/9/04

PMU 51	Exhibits Maintained: 5	Shipments: Received 3 Departed 2
PMU 52	Support: <ul style="list-style-type: none">• Monday tear-down of the NFL Experience, NFL Hospitality and Fox Intersport – re-inventoried• Continued fabrication of Rodeo	
Outlook and Concerns	<ul style="list-style-type: none">• Continue work on Rodeo• Director's Meatball• Trailer maintenance	
Safety	<ul style="list-style-type: none">• Fire extinguisher inspected	

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: Discrepancy and New Requirement tracking for MIDAS tool 1b. Data Type: 2	2. Date of Current Version 1/23/03	3a. DRD No. B- MI-04	3b. RFP/Contract No. NNJ04AA02C
4. Use (Define need for, intended use of, and/or anticipated results of data) Provide government insight into user problems and criticality with the MIDAS system and proposed changes to the system.			5. DRD Category <input checked="" type="checkbox"/> Technical <input type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References (SOW, Clause, etc.) SOW paragraph, 4.1.1.3.4		7. Interrelationships (e.g., with other DRDs)	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

SCOPE: System should track problems and new requirements for all functionality of the MIDAS tool.

CONTENT: Three reports are required.

1. Report of any tool discrepancies (non-compliance with requirement) including:
 - Name and contact information for person reporting discrepancy, including date of report
 - Description of problem/change in detail.
 - Proposed resolution of problem
 - Functional area of tool affected
 - Prioritization of implementation of correction
 - Date of planned/actual correction
Report should be available sorted by prioritization, implementation date, or functional area
2. Report of new software requirements should include:
 - Name and contact information for person request requirement or change, including date or request.
 - Brief description of desired change.
 - Functional area of tool affected, if any.
 - Prioritization of implementation of new/changed requirement
 - Date of planned/actual implementation
Report should be available sorted by prioritization, implementation date, or functional area
3. Graphical chart indicating status of open tool discrepancies. Chart should show, over a specified calendar period, a running tabulation of the uncorrected tool discrepancies. The discrepancies should be grouped into categories of critical, major, and minor.
 - a. Critical – A discrepancy that impacts production of required products. No workaround for the problem has been identified.
 - b. Major - A discrepancy that impacts production of required products. A workaround procedure has been identified, however the procedure requires substantial increase in resources to implement or will result in a significant delay in production of products.
 - c. Minor – All other discrepancies.

FORMAT: Microsoft Office compatible electronic format

9. OPR: OC

10. FIRST SUBMISSION DATE: Reports 1 and 3, 30 days after contract start, Report 2, 90 days after contract start

Frequency Of Submission:

Report 1 and 3 to be provided monthly
Report 2 to be provided quarterly

Additional Submissions:

11. MAINTENANCE: weekly

12. COPIES/DISTRIBUTION:

1 original/record copy to OL Data Management
1 electronic copy to ISS Program Office repository (PALS or equivalent)

13. REMARKS:

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: Reporting of changes to MIDAS part catalog information 1b. Data Type: 3	2. Date of Current Version 1/23/03	3a. DRD No. B- MI-05	3b. RFP/Contract No. NNJ04AA02C
4. Use (Define need for, intended use of, and/or anticipated results of data) Provide change information to affected user of MIDAS parts catalog. Allows coordination of changes with other data systems for consistency and investigation into discrepancies between functional areas.			5. DRD Category <input checked="" type="checkbox"/> Technical <input type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References (SOW, Clause, etc.) SOW paragraph 4.1.1.3.6		7. Interrelationships (e.g., with other DRDs)	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

SCOPE: Changes to mass properties, part numbers, CAGE codes, and Engineering part names stored within the MIDAS parts catalog.

CONTENT: Report shall consist of:

- Name of person performing update
- Date of update
- Source of information that initiated the update
- Justification for making update, including identification of authorizing source
- Description of update in "from" "to" language
- Name of flights affected by the update. This should include those flights which have the part currently manifested.

FORMAT: Microsoft office compatible electronic format

9. OPR: OC

10. FIRST SUBMISSION DATE: With first update of Parts Catalog

Frequency Of Submission: Report sent per update of catalog. Groups of related changes made within a 24 hr period may be summarized within a single report.

Additional Submissions: Specific change reports shall be provided on demand to support investigations into specific part changes.

11. MAINTENANCE:

12. COPIES/DISTRIBUTION:

Electronic copy sent to appropriate program repository OPR (VMDB or equivalent)

13. REMARKS:

Reviewed By:

Chief,
Cost Accounting, Reports,
and Property Branch
Financial Management Division

Concurrence:

Chief Financial Officer

Date

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: NF533 M/Q Cost Reporting	2. Date of Current Version 4/4/03	3a. DRD No. B-PC-01	3b. RFP/Contract No. NNJ04AA02C	Formatted
1b. Data Type: 3			Deleted: 9-BG-79-2-78P/1 NAS 9 - 03003	
4. Use (Define need for, intended use of, and/or anticipated results of data) Provides summary level cost reporting.			5. DRD Category <input type="checkbox"/> Technical <input checked="" type="checkbox"/> Administrative <input type="checkbox"/> SR&QA	
6. References (SOW, Clause, etc.) NPD 9501.1G, NPG 9501.2D and SOW 1.2.3		7. Interrelationships (e.g., with other DRDs) All PC and PM DRDs		

8. PREPARATION INFORMATION: Overall instructions and guidance are in NPG9501.2D "NASA Contractor Financial Management Reporting."

9. SCOPE: The M/Q report shall provide a report for projecting costs and equivalent personnel (EPs), evaluating contractors' actual cost and fee, for the planning, monitoring, and controlling of project and program resources, and for accruing cost.

CONTENT: Supplementary instructions for content are in attachment 1. Content shall also include adding EPs and calling out major subcontractors with a \$1M annual threshold to the cost elements in NPG 9501.2D. Content shall be mapped and reported at the ISS Program WBS level provided in attachment 2. All content of PC-01 shall reconcile to PC-02, PC-03, and PM-02.

FORMAT (attachment 3): In addition the following modifications shall be made to the monthly format. A column shall be added in front of section 6 to provide for "Prior Years Costs" (this column shall remain blank until the beginning of FY05). For section 8 add five columns to provide for six months of forecast; also under section 8, columns shall be added to provide for Balance of Current Year (forecast)," and a breakdown by fiscal year for the remainder of contract value.

The report shall be in three parts:

PC-01A shall be an executive summary narrative with variance explanations at each WBS level provided in attachment 2. Variance explanations shall be required when a +/- 5% variance occurs between the monthly forecasted cost and the actual cost for that month. The computation is (Forecasted Monthly Cost - Monthly Actual Cost / Monthly Forecasted Cost. The variance explanation shall identify the lowest level WBS contributing to the variance. In addition, variance explanations need to detail what caused the variance (i.e., ISSP change in direction, schedule) and the contractor's plan for resolving the affect of the variance. The forecast plan shall be adjusted to reflect any changes in baseline plan approved by NASA. The executive summary shall explain (listing and amount) any contract value changes and any changes between the types of contract.

PC-01B shall be a top level summary listing by contract cost elements (see attachment 1) including EPs for direct labor and EPs for major subcontractors (each on a separate line). Also to be added to the cost elements is direct cost for each major subcontractor, which have a \$1 million threshold.

PC-01C shall be report for each section as indicated in attachment 2. Each section will include cost and EPs for each WBS level as indicated in attachment 2. Each section will also include a summary of cost elements as identified in PC-01B. All costs will be rolled up and totaled per section.

10. OPR: LO

11. FIRST SUBMISSION DATE: NF533Q (initial baseline) shall be submitted 30 days after contract start.

Frequency Of Submission: Monthly

Additional Submissions:

11. MAINTENANCE: The contractor shall provide a revised NF533M immediately to correct errors when deemed necessary by the Financial Management Division. The revised NF533M shall be delivered prior to closure of the current JSC accounting system for the month. The reports shall be maintained electronically by the contractor.

12. COPIES/DISTRIBUTION: Data Transmittal form (DTF) notification:

OL/Data Management	1 Copy
Original/record (hard copy) to the following:	
LW.	1 Copy
OL Data Mgmt	1 Copy
LO	2 Copies
OG/Assessment Office	1 Copy
Contracting Officer	1 Copy
Contracting Officer's Technical Representative (COTR)	1 Copy
DCMA	1 Copy
LF6/Financial Management Division	1 Copy
Additional Distribution per Contracting Officer's Letter	
Program authorized repository (PALS)	
Electronic copy: to a Program authorized repository (PALS or equivalent)	
LW	1 Copy
LO	1 Copy
OG	1 Copy
Contracting Officer	1 Copy
Contracting Officer's Technical Representative (COTR)	1 Copy

13. REMARKS:

B-PC-01 ATTACHMENT 1

The NASA Form 533 (NF533) reports provide data necessary for the following:

1. Projecting costs and hours to ensure that dollar and labor resources realistically support project and program schedules.
2. Evaluating contractors' actual cost and fee data in relation to negotiated contract value, estimated costs, and budget forecast data.
3. Planning, monitoring, and controlling project and program resources.
4. Accruing cost in NASA's accounting system, providing program and functional management information, resulting in liabilities reflected on the financial statements.

Cost is a financial measurement of resources used in accomplishing a specified purpose, such as performing a service, carrying out an activity, acquiring an asset, or completing a unit of work or project. NASA Contractor Financial Management Reporting, NASA Procedures and Guidelines (NPG) 9501.2D, or its most current revision, identifies the cost reporting requirements for a contract.

NASA is required by law to maintain accrual accounting, which requires cost to be reported in the period in which benefits are received, without regard to time of payment. Examples of accrual accounting for common cost elements reported on the NF533 follow:

Cost Element

Labor: Reported to NASA as hours are incurred.

Equipment & Materials (commercial off the shelf): Generally reported to NASA when received and accepted by the contractor.

Manufactured Equipment: Defined as any equipment that is produced to specific requirements that make it useless to anyone else without rework. Cost should be reported to NASA as the equipment is being manufactured. The straight-line method for estimating accrued costs or the use of supplemental information obtained from the vendor are acceptable methods used to calculate the cost accrual amount.

Leases: Reported to NASA using a proration over the life of the lease.

Travel: Reported to NASA as costs are incurred.

Subcontracts: Actual and estimated costs reported by prime contractors shall include subcontractors' incurred costs for the same accounting period. Where subcontract costs are material (significant), they should be separately identified on NF533 reports. The prime contractor shall include in the total cost of each subdivision of work the accrued cost (including fee, if any) of related subcontractor effort. Subcontractors should, therefore, be required to report cost to the prime contractor, using the accrual method of accounting. If the G&A and fee reported by a subcontractor are at the total subcontractor level, these costs must be allocated to specific sub-divisions of work. Data submitted by the subcontractor should be structured similar to the prime contractor's NF533 to enable the prime contractor to properly report to NASA. For Firm Fixed Price subcontracts with a contract value greater than \$500,000, the prime contractor is required to document the methodology used to generate the sub-contractor costs reported and provide this information to the Contracting Officer and Center Deputy Chief Financial Officer (Finance).

Unfilled Orders: Reported as the difference between the cumulative cost incurred to date and amounts obligated to suppliers and subcontractors.

Fee: Should be accrued as earned using a consistent and auditable method to determine the amount. For example: an acceptable method would be to use historical data to determine the amount to accrue each month. Fee should be reported on the NF533 following the "Total Cost" line. Award fee must be reported by the following categories: Base Fee, Fee Earned, Interim Fee, Provisional Fee, Potential Additional Fee, and Total Fee. If any of the above fee categories do not pertain, they should not be included in the NF533.

Prompt Payment Discounts: Cumulative cost reported to NASA should be the full incurred cost. The prompt payment discount amount taken should be reported as a separate line item on the NF533 below the cumulative cost amounts for the contract.

The NF533 reports are the official cost documents used at NASA for cost type, price redetermination, and fixed price incentive contracts. The data contained in the reports must be auditable using Generally Accepted Accounting Principles. Supplemental cost reports submitted in addition to the NF533 must be reconcilable to the NF533.

The due dates for the NF533M and NF533Q reports are outlined in Chapter 3 of NPG 9501.2D. The following is a summary of the NF533 due date requirements.

NF533 Report Due Date

NF533M: Due not later than 10 working days following the close of the contractor's monthly accounting period.

NF533Q: Due not later than the 15th day of the month preceding the quarter being reported.

The due dates reflect the date the NF533 reports are received by personnel on the distribution list, not the date the reports are generated or mailed by the contractor. It is critical that the NF533 reports are submitted in a timely manner to ensure adequate time for NASA to analyze and record the cost into the NASA accounting system.

Uncompensated overtime hours worked should be reported on NF533 reports as a separate line item or in the footnotes.

For contracts which have multiple schedules, a summary NF533 is required to provide a cumulative from inception cost for the contract, regardless of schedule.

An initial NF533 report is required in the NF533Q format to be used as a baseline for the life of the contract. The initial (baseline) NF533Q report shall be submitted by the contractor within 30 days after authorization to proceed has been granted. The initial report shall reflect the original contract value detailed by negotiated reporting categories and shall be the original contract baseline plan. In addition to the initial (baseline) report, monthly NF533 reporting shall begin no later than 30 days after the incurrence of cost.

Column 7b (planned cost incurred/hours worked for the month) and 7d (cumulative planned cost incurred/hours worked) of the NF533M represent the negotiated baseline plan for the contract. There may not be a relationship between the estimates provided in columns 8 of the NF533M to columns 7b and 7d. Columns 7b and 7d represent the legally binding contract negotiated baseline plan plus all authorized changes.

Short and long-term cost estimates, which include all data entered in columns 8 and 9a on the NF533M and NF533Q reports, shall be based on the most current and reliable information available.

Prior period cost adjustments should be reported in column 7a and 7c of NF533M and column 7a of the NF533Q with a footnote discussing the reasons for and amounts of the adjustments.

Monthly NF533 reporting is no longer required once the contract is physically complete, provided the final cost report includes actual cost only (no estimates or forecasts). The contractor must continue to submit monthly NF533 reports as long as estimates for the following period are included. If the final cost of a contract changes after the submission of the "final" contractor cost report, the contractor must submit a revised NF533 report in the month the cost change is recognized.

NASA <small>NATIONAL AERONAUTICS AND SPACE ADMINISTRATION</small>				Monthly Contractor Financial Management Report				Form Approved OMB No. 2700- 0003		2. REPORT FOR MONTH ENDING AND NUMBER OF V			
TO:				FROM:				3. CONTRACT VALUE					
								a. COST		b.			
								\$		\$			
1. DESCRIPT ION OF CONTRACT	a. TYPE			b. CONTRACT NO. & LATEST DEFINITIZED MODIFICATION NO.				4. FUND LIMITATION					
								\$					
	c. SCOPE OF WORK			d. AUTH. CONTR. REP. (Signature)		DATE		5. BILLING					
							a. INVOICE AMTS. BILLED		b. TOTAL P*				
							\$		\$				
6. REPORTING CATEGORY	7. COST INCURRED/HOURS WORKED				8. ESTIMATED COST/HOURS TO COMPLETE				9. ESTIMATED FINAL				
	DURING MONTH		CUM TO DATE		DETAIL		BALANCE OF CONTRACT c.	COST/HOURS					
	ACTUAL a.	PLANNED b.	ACTUAL c.	PLANNED d.	a.	b.		CONTRACTOR ESTIMATE a.	CONTR VALL b.				
Baseline Plan Identification (Col. 7b & 7d): Revision No. _____, Dated _____													

[illegible]

ATTACHMENT 2

REPORT	PWBS	SOW	TITLE	CF Section	LOE Section	IDIQ Section	Total
PC01C-TOTAL	CF		TOTAL BY SOW BY CONTRACT TYPE				
PC01C-SUBTOTAL	1.0		TOTAL MANAGEMENT & INTEGRATION	X			
	4.0		TOTAL OPERATIONS	X			
	6.0		TOTAL SAFETY AND MISSION ASSURANCE	X			
						IDIQ Section	Total
	IDIQ		TOTAL BY SOW BY CONTRACT TYPE				
	1.0		TOTAL MANAGEMENT & INTEGRATION			X	
	4.0		TOTAL OPERATIONS				
	6.0		TOTAL SAFETY AND MISSION ASSURANCE				
						LOE Section	Total
	LOE		TOTAL BY SOW BY CONTRACT TYPE				
	1.0		TOTAL MANAGEMENT & INTEGRATION		X		
	4.0		TOTAL OPERATIONS		X		
	6.0		TOTAL SAFETY AND MISSION ASSURANCE				
PC01Ci				CF Section	LOE Section	IDIQ Section	Total
	1.1		PROGRAM MANAGEMENT (Except 1.1.2)	X			
	1.1.2		INTERNAL/EXTERNAL PROGRAM REVIEW SUPPORT		X		
	1.2		BUSINESS MANAGEMENT	X			
	1.3		CONFIGURATION MANAGEMENT/DATA INTEGRATION	X			
	1.4		PROGRAM INFORMATION TECHNOLOGY	X			
PC01Cii				CF Section	LOE Section	IDIQ Section	Total
	1.5.1.1		TRANSLATION			X	
	Per TO		Requested Translations			X	
	Per TO		Continuous Support			X	
PC01Cii				CF Section	LOE Section	IDIQ Section	Total
	1.5.1.2		INTERPRETATION			X	
	Per TO		Requested Interpretation			X	
	Per TO		Continuous Support			X	
PC01Civ				CF Section	LOE Section	IDIQ Section	Total
	1.5.1.3.1		JSC LANGUAGE EDUCATION CENTER	X			
	1.5.1.3.2		CREW LANGUAGE TRAINING			X	
PC01v				CF Section	LOE Section	IDIQ Section	Total
	1.5.1.4.1		TRANSPORTATION SERVICES			X	
	1.5.1.4		LOGISTICS (OTHER THAN TRANSPORTATION)		X		
PC01vi				CF Section	LOE Section	IDIQ Section	Total
	1.5.2		INTERNATIONAL MISSION INTEGRATION				
	1.5.2.1		INTERNATIONAL SHIPPING COORDINATION	X			
	1.5.2.3		ISS/HAM RADIO PROJECT	X			
	1.5.2.4		JOINT CARGO CERTIFICATION TEAM			X	

ATTACHMENT 2 cont.

CF Section LOE Section IDIQ Section Total

PC01Cvi	4.1.1.1	INCREMENT/STAGE INTEGRATION (Except 4.1.1.1.5 & 4.1.1.1.9)	X				
	4.1.1.1.5	INCREMENT ENGINEER TASKS			X		
	4.1.1.1.9	STATION TACTICAL INCREMENT CONSUMABLES AND RESOURCE MGT			X		

CF Section LOE Section IDIQ Section Total

PC01Cviii	4.1.1.2	LAUNCH PACKAGE INTEGRATION (Except 4.1.1.2.8)			X		
	4.1.1.2.8	LAUNCH PACKAGE SUPPORT FUNCTIONS	X				

CF Section LOE Section IDIQ Section Total

PC01Cix	4.1.1.3	MANIFEST (Except 4.1.1.3.3)	X				
	4.1.1.3.3	TACTICAL/INCREMENT MANIFEST			X		

CF Section LOE Section IDIQ Section Total

PC01Cx	4.1.1.4	IMS			X		
	4.1.1.5	CREW PROVISIONING/MISSION HABITABILITY (Except 4.1.1.5.1)			X		
	4.1.1.5.1	CREW PROVISIONING	X				
	4.1.1.6	IMAGERY (Except 4.1.1.6.4)	X				
	4.1.1.6.4	SPECIAL REQUIREMENTS AND TECHNOLOGY ADVANCEMENT			X		
	4.1.1.7	PROGRAM OPERATIONS INTEGRATION (Except 4.1.1.7.5)	X				
	4.1.1.7.5	SPECIAL PROJECTS & STUDIES			X		
	4.1.1.9	ON-ORBIT STOWAGE CAPABILITIES & CONFIGURATION (Except 4.1.1.9.2)	X				
	4.1.1.9.2	TACTICAL INTERNAL AND EXTERNAL VOLUME CONFIGURATION			X		

CF Section LOE Section IDIQ Section Total

PC01Cxi	6.1	S&MA MANAGEMENT	X				
	6.2	S&MA INTEGRATION	X				
	6.3	PROGRAM RISK	X				
	6.4	ISS SAFETY PROGRAM	X				

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Modified Cost Performance Report (CPR)	2. Date of Current Version 01/01/04	3a. DRD No. B-PC-02	3b. RFP/Contract No. NNJ04AA02C
1b. Data Type: 3			
4. Use (Define need for, intended use of, and/or anticipated results of data) Provides five formats containing cost and related data for measuring contractor cost and schedule performance.			5. DRD Category ___ Technical X Administrative ___ SR&QA
6. References (SOW, Clause, etc.) NPD 9501.3, NPG 9501.3 and SOW 1.2.3.2		7. Interrelationships (e.g., with other DRDs) All PC and PM DRDs	

8. PREPARATION INFORMATION: See attachments

SCOPE: PC-02 must be reconcilable with PC-01 and PM-02

CONTENT:

FORMAT:

9. OPR: OG

10. FIRST SUBMISSION DATE: Ten (10) Workdays after initial month end

Frequency Of Submission: Monthly

Additional Submissions:

11. MAINTENANCE:

12. COPIES/DISTRIBUTION: Data Transmittal form (DTF) notification:

OL/Data Management	1 Copy
Original/record (hard copy) to the following:	
LW	1 Copy
LO	2 Copies
OG/Assessment Office	1 Copy
Contracting Officer	1 Copy
Contracting Officer's Technical Representative (COTR)	1 Copy

Electronic copy: to a Program authorized repository (PALS or equivalent)	
LW	1 Copy
LO	1 Copy
OG	1 Copy
Contracting Officer	1 Copy
Contracting Officer's Technical Representative (COTR)	1 Copy

Electronic Data Interchange in American National Standards Institute (ANSI) X12 Standards (Transaction sets 839 for cost and 806 for schedule):

LO	1 Copy
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13. REMARKS: N/A

**DATA REQUIREMENTS DOCUMENT
PREPARATION INFORMATION**

TITLE: COST PERFORMANCE REPORT (CPR)

8.0 DESCRIPTION /PURPOSE (Attachment)

8.1 INTRODUCTION

8.1.1 This report consists of five formats containing cost and related data for measuring contractors' cost and schedule performance. Format 1 (Sample Format 1) provides data to measure cost and schedule performance by summary level Work Breakdown Structure (WBS) elements, the hardware, software and services the Government is buying. Format 2 (Sample Format 2) provides the same data by the contractor's organization. Format 3 (Sample Format 3) provides the budget baseline plan against which performance is measured. Format 4 (Sample Format 4) provides staffing forecasts for correlation with the budget plan and cost estimates. Format 5 (Sample Format 5) is a narrative report used to explain significant cost and schedule variances and other identified contract problems and topics.

8.1.2 CPR data will be used by NASA managers to: (a) integrate cost and schedule performance data with technical performance measures, (b) identify the magnitude and impact of actual and potential problem areas causing significant cost and schedule variances, and (c) provide valid, timely program status information to higher management.

8.1.3 The CPR is a management report. It should provide timely, reliable summary-level data with which to assess current and projected contract performance. The CPR's primary value to government program management is its ability to reasonably reflect current contract status. If the CPR contains excessively detailed or outdated information, management's ability to make informed, timely decisions may be impaired. It is important that the CPR be as accurate as possible so it can be used for its intended purpose. It should be used by the NASA management team, including Program Managers, engineers, cost estimators and financial management personnel, to confirm, quantify and track known or emerging contract problems and as a basis for communicating with the contractor. The contractor should ensure that CPR data accurately reflect how work is being performed and is consistent with the actual contract status.

8.2 APPLICATION /INTERRELATIONSHIP

8.2.1 This Data Requirements Document (DRD) contains the format and content preparation instructions for the data product generated by the specific and discrete task requirements as delineated in the contract.

8.2.2 This DRD will be used in conjunction with the standard NASA Form 533M/Q, and the Contract Work Breakdown Structure DRD.

8.2.3 The CPR will be provided consistent with Industry Guidelines for Earned Value Management Systems (ANSI/EIA Standard 748-98).

8.2.4 Unless otherwise provided in the contract, the CPR will be required on a monthly basis and submitted to the DRD distribution list no later than 10 workdays following the reporting cutoff date. Reports may reflect data either as of the end of the calendar month or as of the contractor's accounting period cutoff date.

8.2.5 Data reported in the CPR will pertain to all authorized contract work, including both priced and unpriced effort.

8.2.6 Certain aspects of the report are subject to negotiation between the Government and the contractor, such as:

8.2.6.1 The WBS levels to be reported on Format 1. The level of detail to be reported on Format 1 normally will be limited to level three of the Contract WBS or higher, but lower levels may be specified for high-cost or -risk items. The Government and the contractor should periodically review and adjust as necessary WBS reporting levels on Format 1 to ensure they continue to provide appropriate visibility without requiring excessive information. If there is a significant problem at a lower level, detailed reporting for that WBS element may be required until the problem is resolved.

8.2.6.2 All 5 formats are required.

8.2.6.3 The variance analysis thresholds, which, if exceeded, require problem analysis and narrative explanations. (Thresholds to be established by LO and contractor.)

8.2.6.4 The specific time increments to be used for the baseline and staffing projections required by Formats 3 and 4, will correspond (within the limits of the contractor's disclosed Fiscal Calendar) with the Government Fiscal Year.

8.2.6.5 The reporting provisions which apply to the Cost of Money line on Formats 1 and 2.

8.2.6.6 Organizational categories for Format 4, if different from Format 2. The Government may request that different organizational categories be used for reporting staffing in Format 4. If so, the Government and the contractor will negotiate the Format 4 categories. The Format 2 categories shall reflect the contractor's internal organization being used to perform the contract at hand.

8.2.6.7 In all cases, the CPR CDRL is subject to "tailoring." Tailoring is defined as deleting requirements from this DRD. All negotiated reporting provisions will be specified in the contract.

8.3 PREPARATION INSTRUCTIONS

8.3.1 Format. Contractor formats should be substituted whenever they contain all the required data elements at the specified reporting levels in a form suitable for NASA management.

8.3.2 Content. The Cost Performance Report shall contain the following:

8.3.2.1 Heading Information - Formats 1 - 5. Preparation instructions for Heading Information (Blocks 1 through 4) apply to Formats 1 through 5.

8.3.2.1.1 Contractor. Enter in Block 1.a the contractor's name and division, if applicable. Enter in Block 1.b the plant location and mailing address of the reporting contractor.

8.3.2.1.2 Contract. Enter the contract name in Block 2.a, the contract number in Block 2.b, the contract type in Block 2.c and the contract share ratio, if applicable, in Block 2.d.

8.3.2.1.3 Program. Enter in Block 3.a the program name, number, acronym and/or type, model, and series, or other designation of the item(s) purchased under the contract. Indicate the program phase, DDT&E or Production, in Block 3.b.

8.3.2.1.4 Report Period. Enter the beginning date in Block 4.a and the ending date in Block 4.b of the period covered by the report.

8.3.2.1.5 Security Classification. Enter the appropriate security classification at the top and bottom of each page.

8.3.2.1.6 Dollars in Factors. If reported dollar amounts have been factored down by a thousand, a million or a billion, enter the factor at the top of each page.

8.3.2.2 Format 1 - Work Breakdown Structure.

8.3.2.2.1 Contract Data.

8.3.2.2.1.1 Quantity. Enter in Block 5.a the number of items to be procured on this contract.

8.3.2.2.1.2 Negotiated Cost. Enter in Block 5.b the dollar value (excluding fee or profit) on which contractual agreement has been reached as of the cutoff date of the report. For an incentive contract, enter the definitized contract target cost. Amounts for changes will not be included in this item until they have been priced and incorporated in the contract through contract change order or supplemental agreement. For a cost plus fixed fee or award fee contract, enter the estimated cost negotiated. Changes to the estimated cost will consist only of amounts for changes in the contract scope of work, not for cost growth ("overrun") from the original estimated cost.

8.3.2.2.1.3 Estimated Cost of Authorized, Unpriced Work. Enter in Block 5.c the amount (excluding fee or profit) estimated for that work for which written authorization has been received, but for which definitized contract prices have not been incorporated in the contract through contract change order or supplemental agreement.

8.3.2.2.1.4 Target Profit/Fee. Enter in Block 5.d the fee or percentage of profit which will apply if the negotiated cost of the contract (see 8.3.2.2.1.2, above) is met.

8.3.2.2.1.5 Target Price. Enter in Block 5.e the target price (negotiated contract cost plus profit/fee) applicable to the definitized contract effort.

8.3.2.2.1.6 Estimated Price. Based on the most likely estimate of cost at completion for all authorized contract work and the appropriate profit/fee, incentive, and cost sharing provisions, enter in Block 5.f the estimated final contract price (total estimated cost to the Government). This number will be based on the most likely management estimate at completion in Block 6.c.1 and normally will change whenever the management estimate or the contract is revised.

8.3.2.2.1.7 Contract Ceiling. Enter in Block 5.g the contract ceiling price applicable to the definitized effort.

8.3.2.2.1.8 Estimated Contract Ceiling. Enter in Block 5.h the estimated ceiling price applicable to all authorized contract effort including both definitized and undefinitized effort.

8.3.2.2.2 Estimated Cost at Completion. These blocks will present the contractor's range of estimated costs at completion. The range of estimates is intended to allow contractor management flexibility to express possible cost outcomes. Contractors are encouraged to provide the most accurate EACs possible through program-level assessments of factors that may affect the cost, schedule or technical outcome of the contract. Where possible, such program-level assessments should include consideration of known or anticipated risk areas, and planned risk reductions or cost containment measures. EACs should be reported without regard to contract ceiling, if applicable. The methods used to develop worst case, best case and most likely management estimates at completion need not be described in the contractor's C/SCSC-compliant management control system description or CPR-No Criteria management procedures.

8.3.2.2.2.1 Management Estimate at Completion - Best Case. Enter in Block 6.a.1 the contractor's best case estimate at completion. The best case estimate is the one that results in the lowest cost to the Government. This estimate should be based on the outcome of the most favorable set of circumstances. If this estimate is different from the most likely estimate at completion (Block 6.c.1), the assumptions and conditions underlying this estimate should be explained briefly in Format 5. This estimate is for informational purposes only; it is not an official company estimate. There is no requirement for the contractor to prepare and maintain backup data beyond the explanation provided in Format 5.

8.3.2.2.2.2 Management Estimate at Completion - Worst Case. Enter in Block 6.b.1 the contractor's worst case estimate at completion. The worst case estimate is the one that results in the highest cost to the Government. This estimate should be based on the outcome of the least favorable set of circumstances. If this estimate is different from the most likely estimate at completion (Block 6.c.1), the assumptions and conditions underlying this estimate should be explained briefly in Format 5. This estimate is for informational purposes only; it is not an official company estimate. There is no requirement for the contractor to prepare and maintain backup data beyond the explanation provided in Format 5.

8.3.2.2.2.3 Management Estimate at Completion - Most Likely. Enter in Block 6.c.1 the contractor's most likely estimate at completion. This estimate is the contractor's official contract EAC and, as such, takes precedence over the estimates presented in Column (15) of Formats 1 and 2 and Blocks 6.a.1 and 6.b.1. This EAC is the value that the contractor's management believes is the most likely outcome based on a knowledgeable estimate of all authorized work, known risks and probable future conditions. This value need not agree with the total of Column (15) (Block 8.e). However, any difference should be explained in Format 5 in such terms as risk, use of management reserve, or higher management knowledge of current or future contract conditions. This EAC need not agree with EACs contained in the contractor's internal data, but must be reconcilable to them. The most likely EAC also will be reconcilable to the contractor's latest statement of funds required as reported in the Contract Funds Status Report, or its equivalent, if this report is a contractual requirement.

8.3.2.2.2.4 Contract Budget Base. Enter in Block 6.c.2 the total of negotiated cost (Block 5.b) and estimated cost of authorized, unpriced work (5.c).

8.3.2.2.2.5 Variance. Enter in Block 6.c.3 the Contract Budget Base (Block 6.c.2) minus the most likely estimate at complete (Block 6.c.1). This value will be explained in Format 5 according to applicable contractual requirements.

8.3.2.2.3 Authorized Contractor Representative. Enter in Block 7.a the name of the authorized person signing the report. Enter that person's title in Block 7.b. The authorized person will sign in Block 7.c. Enter the date signed in Block 7.d.

8.3.2.2.4 Performance Data.

8.3.2.2.4.1 Work Breakdown Structure Element. Enter in Column (1) of Block 8.a the noun description of the WBS items for which cost information is being reported. WBS items or levels reported will be those specified in the contract. (See 8.2.6.1 above.)

8.3.2.2.4.2 Cost of Money. Enter in Columns (2) through (16) of Block 8.b the Facilities Capital Cost of Money applicable to the contract.

8.3.2.2.4.3 General and Administrative (G&A). Enter in Columns (2) through (16) of Block 8.c the appropriate G&A costs. If G&A has been included in the total costs reported in Block 8.a above, G&A will be shown as a nonadd entry on this line with an appropriate notation. If a G&A classification is not used, no entry will be made other than an appropriate notation to that effect.

8.3.2.2.4.4 Undistributed Budget. Enter the amount of budget applicable to contract effort which has not yet been identified to WBS elements at or below the reporting level. For example, contract changes which were authorized late in the reporting period should have received a total budget; however, assignment of work and allocation of budgets to individual WBS elements may not have been accomplished as of the end of the period. Budgets which can be identified to WBS elements at or below the specified reporting level will be included in the total budgets shown for the WBS elements in Block 8.a and will not be shown as undistributed budget. Enter in Column (15) of Block 8.d the estimate at completion for the scope of work represented by the undistributed budget in Column (14) of Block 8.d. Enter in Column (16) of Block 8.d the variance, if any, and fully explain it in Format 5. All undistributed budget will be fully explained in Format 5.

8.3.2.2.4.4.1 Use of Undistributed Budget. The provisions made in this report for undistributed budget are primarily to accommodate temporary situations where time constraints prevent adequate budget planning or where contract effort can only be defined in very general terms. Undistributed budget should not be used as a substitute for adequate contract planning. Formal budgets should be allocated to contract effort and responsible organizations at the earliest possible time, preferably within the next reporting period.

8.3.2.2.4.5 Subtotal (Performance Measurement Baseline). Enter the sum of the direct, indirect, Cost of Money, and G&A costs and budgets in Columns (2) through (16) of Block 8.a through e. This subtotal is also referred to as the Performance Measurement Baseline because it represents the allocated budget baseline (less management reserve) against which performance is actually measured.

8.3.2.2.4.6 Management Reserve. Management reserve is an amount of the overall contract budget withheld for management control purposes rather than for the accomplishment of a specific task or set of tasks. It is not a contingency fund, and may not be eliminated from contract prices by the Government during subsequent negotiations nor used to absorb the cost of contract changes. In Column (14) of Block 8.f enter the total amount of budget identified as management reserve as of the end of the current reporting period. The amounts shown as management reserve in Formats 1, 2 and 3 will agree. Amounts of management reserve applied to WBS elements during the reporting period will be listed in Block 6.b of Format 3 and explained in Format 5.

8.3.2.2.4.6.1 Negative Management Reserve. Negative entries will not be made in Management Reserve (Column (14) of Block 8.f). There is no such thing as "negative management reserve." If the contract is budgeted in excess of the Contract Budget Base (the negotiated contract cost plus the estimated cost for authorized, unpriced work), the provisions applicable to formal reprogramming and the instructions in paragraphs 8.3.2.2.5.1, 8.3.2.2.6.6, 8.3.2.2.6.7 and 8.3.2.4.1.7 apply.

8.3.2.2.4.7 Total. Enter the sum of all direct, indirect, Cost of Money, G&A cost, undistributed budgets and management reserves, if applicable, in Columns (2) through (14) of Block 8.g. The Total lines of Format 1 (Block 8.g) and Format 2 (Block 5.g) will agree. The total of Column (14), Block 8.g, will equal the Total Allocated Budget shown in Block 5.f on Format 3.

8.3.2.2.5 Reconciliation to Contract Budget Base.

8.3.2.2.5.1 Formal Reprogramming. In exceptional cases, the procuring agency may authorize the contractor to establish performance measurement budgets that in total exceed the Contract Budget Base. This process is called formal reprogramming. The contractor and the Government will agree on how the results of a formal reprogramming will be reported in the Cost Performance Report before the formal reprogramming is initiated. This agreement and any other pertinent details on the reporting of the formal reprogramming will be included in Format 5. Blocks 9.a and 9.b provide the contractor the opportunity to reconcile the higher performance measurement budgets, also called an "Over Target Baseline," to the Contract Budget Base. (See 8.3.2.2.6.6, 8.3.2.2.6.7, 8.3.2.4.1.7, and 8.3.2.6.5 below for more information on reporting Over Target Baselines.)

8.3.2.2.5.2 Variance Adjustment. In reporting the results of a formal reprogramming (Over Target Baseline) the contractor may 1) apply the additional budget to completed work, thereby eliminating some or all of the existing cost or schedule variances, 2) apply the additional budget to remaining work, 3) apply some of the additional budget to completed work and some to remaining work, or 4) apply some of the additional budget to management reserve. If the contractor uses a portion of the additional budget to eliminate variances applicable to completed work, the total adjustments made to the cost and schedule variances will be shown in Columns (10) and (11) of Block 9.a. The total cost variance adjustment entered in Column (11) of Block 9.a will be the sum of the individual cost variance adjustments shown in Column (12) of Blocks 8.a through g.

8.3.2.2.5.3 Total Contract Variance. In Columns (10) and (11) of Block 9.b, enter the sum of the cost and schedule variances shown on the Total line (Block 8.g) and on the Variance Adjustment line (Block 9.a). In Column (14) enter the Contract Budget Base from Block 6.c.2. In Column (15) enter the management estimate at completion from Block 6.c.1. In Column (16) of Block 9.b enter the difference between Columns (14) and (15) of Block 9.b.

8.3.2.2.6 Columns (2) Through (16). When compliance with the C/SCSC is contractually required, the data in Columns (2) through (16) shall reflect the output of the contractor's C/SCSC-compliant integrated management system (refer to DFARS 252.234-7001). When compliance with the C/SCSC is not contractually required ("CPR - No Criteria"), the data in these columns shall be derived using the contractor's summary management procedures (refer to DFARS 252.242-7005).

8.3.2.2.6.1 Column (2) and Column (7) - Budgeted Cost - Work Scheduled. For the time period indicated, enter the Budgeted Cost for Work Scheduled (BCWS) in these columns.

8.3.2.2.6.2 Column (3) and Column (8) - Budgeted Cost - Work Performed. For the time period indicated, enter the Budgeted Cost for Work Performed (BCWP) in these columns.

8.3.2.2.6.3 Column (4) and Column (9) - Actual Cost - Work Performed (ACWP). For the time period indicated, enter the Actual Cost of Work Performed without regard to ceiling. In all cases, costs and budgets will be reported on a comparable basis.

8.3.2.2.6.4 Column (5) and Column (10) - Variance - Schedule. For the time period indicated, these columns reflect the differences between BCWS and BCWP. For the current period, Column (5) (schedule variance) is derived by subtracting Column (2) (BCWS) from Column (3) (BCWP). For the cumulative to date, Column (10) (schedule variance) is derived by subtracting Column (7) (BCWS) from Column (8) (BCWP). A positive figure indicates a favorable variance. A negative figure (indicated by parentheses) indicates an unfavorable variance. Significant variances as specified in the contract will be fully explained in Format 5. If the contract does not specify variance analysis thresholds, the contractor will provide appropriate variance analyses. (See 8.3.2.6.3.2.4 below.)

8.3.2.2.6.5 Column (6) and Column (11) - Variance - Cost. For the time period indicated, these columns reflect the difference between BCWP and ACWP. For the current period, Column (6) (cost variance) is derived by subtracting Column (4) (ACWP) from Column (3) (BCWP). For cumulative to date, Column (11) (cost variance) is derived by subtracting Column (9) (ACWP) from Column (8) (BCWP). A positive figure indicates a favorable variance. A negative figure (indicated by parentheses) indicates an unfavorable variance. Significant variances as specified in the contract will be fully explained in Format 5. If the contract does not specify variance analysis thresholds, the contractor will provide appropriate variance analyses. (See 8.3.2.6.3.2.4 below.)

8.3.2.2.6.6 Column (12) Reprogramming Adjustments - Cost Variance. Formal reprogramming (Over Target Baseline) results in budget allocations in excess of the Contract Budget Base and, in some instances, adjustments to previously reported variances. If previously reported variances are being adjusted, the adjustment applicable to each reporting line item affected will be entered in Column (12). The total of Column (12) will equal the amount shown on the Variance Adjustment line (Block 9.a) in Column (11).

8.3.2.2.6.7 Column (13) Reprogramming Adjustments - Budget. Enter the total amounts added to the budget for each reporting line item as the result of formal reprogramming (Over Target Baseline). The amounts shown will consist of the sum of the budgets used to adjust cost variances (Column (12)) plus the additional budget added to the WBS element for remaining work. Enter the amount of budget added to management reserve in the space provided on the management reserve line (Block 8.f). The total of Column (13) will equal the amount the Total Allocated Budget has been budgeted in excess of the Contract Budget Base as shown in Block 5.g of Format 3. An explanation of the reprogramming will be provided in Format 5.

8.3.2.2.6.7.1 Formal Reprogramming Reporting. Columns (12) and (13) are intended for use only in situations involving formal reprogramming (Over Target Baseline). Internal replanning actions within the Contract Budget Base do not require entries in these columns. Where contractors are submitting CPR data directly from automated systems, the addition of Columns (12) and (13) as shown may not be practical due to computer reprogramming problems or space limitations. In such cases, the information may be provided on a separate sheet and attached as Format 1a to each subsequent report. Contractors will not be required to abandon or modify existing automated reporting systems to include Columns (12) and (13) if significant costs will be associated with such change. Nor will contractors be required to prepare the report manually solely to include this information.

8.3.2.2.6.7.2. Formal Reprogramming Timeliness. Formal reprogramming (Over Target Baseline) can be a significant undertaking that may require more than a month to implement. To preclude a disruption of management visibility caused by a reporting hiatus, the contractor should implement the formal reprogramming expeditiously. If a reporting hiatus is needed, the contractor and the Government will agree on the date and duration of the hiatus before the formal reprogramming is initiated.

8.3.2.2.6.8 Column (14) - At Completion - Budgeted. Enter the budgeted cost at completion for the items listed in Column (1). This entry will consist of the sum of the original budgets plus or minus budget changes resulting from contract changes, internal replanning, and application of management reserves. The total (Block 8.g) will equal the Total Allocated Budget shown in Block 5.f on Format 3.

8.3.2.2.6.9 Column (15) - At Completion - Estimated. Enter the latest revised estimate of cost at completion including estimated overrun/underrun for all authorized work. If the subtotal (Block 8.e) does not agree with the most likely management estimate at completion (Block 6.c.1), the difference will be explained in Format 5. (See 8.3.2.2.3 above.)

8.3.2.2.6.10 Column (16) - At Completion - Variance. Enter the difference between the Budgeted - At Completion (Column (14)) and the Estimated - At Completion (Column (15)) by subtracting Column (15) from Column (14). A negative figure (indicated by parentheses) reflects an unfavorable variance. Significant variances as specified in the contract will be fully explained in Format 5. If the contract does not specify variance analysis thresholds, the contractor will provide appropriate variance analyses. (See 8.3.2.6.3.2.4 below.)

8.3.2.3 Format 2 - Organizational Categories.

8.3.2.3.1 Performance Data.

8.3.2.3.1.1 Column (1) - Organizational Category. In Block 5.a list the organizational categories which reflect the contractor's internal management structure. This format will be used to collect organizational cost information at the total contract level rather than for individual WBS elements. The level of detail to be reported will normally be limited to the organizational level immediately under the operating head of the facility. The contractor shall be given flexibility to report this information according to its own internal management structure. If the contractor is organized by product teams, this format may not be needed because it should resemble Format 1.

8.3.2.3.1.2 Cost of Money. Enter in Columns (2) through (16) of Block 5.b the Facilities Capital Cost of Money applicable to the contract.

8.3.2.3.1.3 General and Administrative. Enter in Columns (2) through (16) of Block 5.c the appropriate G&A costs. (See 8.3.2.2.4.3 above.)

8.3.2.3.1.4 Undistributed Budget. Enter in Column (14) of Block 5.d the budget applicable to contract effort, which cannot be planned in sufficient detail to be assigned to a responsible organizational area at the reporting level. The amount shown on this format may exceed the amount shown as undistributed budget on Format 1 if budget is identified to a task at or below the WBS reporting level but organizational identification has not been made; or may be less than the amount on Format 1 where budgets have been assigned to organizations but not to WBS elements. Enter in Column (15) of Block 5.d the estimate at completion for the scope of work represented by the

undistributed budget in Column (14) of Block 5.d. Enter in Column (16) of Block 5.d the variance, if any, and fully explain it in Format 5. (See 8.3.2.2.4.4 above.)

8.3.2.3.1.5 Subtotal (Performance Measurement Baseline). Enter the sum of the direct, indirect, Cost of Money, and G&A costs and budgets in Columns (2) through (16) of Block 5.a through e. (See 8.3.2.2.4.5 above.)

8.3.2.3.1.6 Management Reserve. In Column (14) of Block 5.f enter the amount of budget identified as management reserve. The Management Reserve entry will agree with the amounts shown in Format 1 and 3. (See 8.3.2.2.4.6 above.)

8.3.2.3.1.7 Total. Enter the sum of all direct, indirect, Cost of Money, and G&A costs and budgets, undistributed budgets and management reserves, if applicable, in Columns (2) through (14) of Block 5.g. The totals on this page will equal the Total line on Format 1. The total of Column (14) will equal the Total Allocated Budget shown in Block 5.f on Format 3.

8.3.2.3.2 Columns (2) Through (16). The instructions applicable to these columns are the same as the instructions for corresponding columns on Format 1. (See 8.3.2.2.6 and 8.3.2.2.6.1 through 8.3.2.2.6.10 above.)

8.3.2.4 Format 3 - Baseline.

8.3.2.4.1 Contract Data.

8.3.2.4.1.1 Original Negotiated Cost. Enter in Block 5.a the dollar value (excluding fee or profit) negotiated in the original contract. For a cost plus fixed fee or award fee contract, enter the estimated cost negotiated. For an incentive contract, enter the definitized contract target cost.

8.3.2.4.1.2 Negotiated Contract Changes. Enter in Block 5.b the cumulative cost (excluding fee or profit) applicable to definitized contract changes, which have occurred since the beginning of the contract.

8.3.2.4.1.3 Current Negotiated Cost. Enter in Block 5.c the sum of Blocks 5.a and 5.b. The amount shown should equal the current dollar value (excluding fee or profit) on which contractual agreement has been reached and should be the same as the amount in Negotiated Cost (Block 5.b) on Format 1.

8.3.2.4.1.4 Estimated Cost of Authorized, Unpriced Work. Enter in Block 5.d the estimated cost (excluding fee or profit) for contract changes for which written authorizations have been received, but for which contract prices have not been incorporated in the contract, as shown in Block 5.c of Format 1.

8.3.2.4.1.5 Contract Budget Base. Enter in Block 5.e the sum of Blocks 5.c and 5.d.

8.3.2.4.1.6 Total Allocated Budget. Enter in Block 5.f the sum of all budgets allocated to the performance of the contractual effort. The amount shown will include all management reserves and undistributed budgets. This amount will be the same as that shown on the Total line in Column (14) on Format 1 (Block 8.g) and Format 2 (Block 5.g).

8.3.2.4.1.7 Difference. Enter in Block 5.g the difference between Blocks 5.e and 5.f. In most cases, the amounts shown in Blocks 5.e and 5.f will be identical. If the amount shown in Blocks 5.f exceeds that shown in Block 5.e, it usually is an indication of a formal reprogramming (Over Target

Baseline). The difference should be explained in Format 5 at the time the negative value appears and subsequently for any change in the value.

8.3.2.4.1.8 Contract Start Date. Enter in Block 5.h the date the contractor was authorized to start work on the contract, regardless of the date of contract definitization. (Long lead procurement efforts authorized under prior contracts are not to be considered.)

8.3.2.4.1.9 Contract Definitization Date. Enter in Block 5.i the date the contract was definitized.

8.3.2.4.1.10 Planned Completion Date. Enter in Block 5.j the completion date to which the budgets allocated in the Performance Measurement Baseline have been planned. This date should represent the planned completion of all significant effort on the contract. The cost associated with the schedule from which this date is taken is the Total Allocated Budget (Block 5.f of Format 3).

8.3.2.4.1.10.1 Performance Measurement Schedule Inconsistent With Contractual Schedule. In exceptional cases, the contractor may determine that the existing contract schedule cannot be achieved and no longer represents a reasonable basis for management control. With Government approval, the contractor may rephase its performance measurement schedule to new dates which exceed the contractual milestones, a condition known as "Over Target Schedule." These new dates are for performance measurement purposes only and do not represent an agreement to modify the contract terms and conditions. The Government and the contractor will agree on the new performance measurement schedule prior to reporting it in the Cost Performance Report. The contractor should provide pertinent information in Format 5 on any schedule milestones that are inconsistent with contractual milestones, beginning the month the schedule is implemented and each month thereafter.

8.3.2.4.1.10.2 Indicators of a Performance Measurement Schedule Inconsistent With the Contractual Schedule. Formal reprogramming or internal replanning may result in performance measurement milestones that are inconsistent with the contractual milestones (Over Target Schedule). A difference between the planned completion date (Block 5.j) and the contract completion date (Block 5.k) indicates that some or all of the performance measurement milestones are inconsistent with the contractual milestones. However, some performance measurement milestones may be inconsistent with contractual milestones even if these dates are the same.

8.3.2.4.1.11 Contract Completion Date. Enter in Block 5.k the contract scheduled completion date in accordance with the latest contract modification. The cost associated with the schedule from which this date is taken is the Contract Budget Base (Block 5.e of Format 3).

8.3.2.4.1.12 Estimated Completion Date. Enter the contractor's latest revised estimated completion date. This date should represent the estimated completion of all significant effort on the contract. The cost associated with the schedule from which this date is taken is the most likely management estimate at completion (Block 6.c.1 of Format 1).

8.3.2.4.2 Column (1) - Item.

8.3.2.4.2.1 Performance Measurement Baseline (Beginning of Period). Enter in Block 6.a the time-phased Performance Measurement Baseline (PMB) (including G&A) which existed at the beginning of the current reporting period. Most of the entries on this line are taken directly from the PMB (End of Period) line on the previous report. For example, the number in Column (4) on the PMB (End of Period) line from last month's report becomes the number in Column (3) on the PMB (Beginning of Period) line on this report. The number in Column (5) (end of period) last report becomes Column

(4) (beginning of period) on this report, etc. This rule pertains through Column (9) where the time increments change from monthly to some other periods of time. At this point, a portion of Column (10) (end of period) would go into Column (9) (beginning of period) and the remainder of Column (10) (end of period) would go into Column (10) (beginning of period). Columns (11) through (16) simply move directly up to the (beginning of period) line without changing columns. Total amounts should be segregated by major contract cost categories (e.g., development and spares).

8.3.2.4.2.2 Baseline Changes. List by number in Block 6.b, the contract changes and supplemental agreements authorized during the reporting period. All authorized baseline changes should be listed whether priced or unpriced. The amount of management reserve applied during the period should also be listed. Total amounts should be segregated by major contract cost categories (e.g., development and spares).

8.3.2.4.2.3 Performance Measurement Baseline (End of Period). Enter in Block 6.c the time-phased PMB as it exists at the end of the reporting period. The difference between this line and the PMB (Beginning of Period) should represent the effects of the authorized changes and allocations of management reserves made during the period. Significant differences should be explained in Format 5 in terms of reasons for necessary changes to time-phasing due to internal replanning or formal reprogramming, and reasons for the application of management reserve. Total amounts should be segregated by major contract cost categories (e.g., development and spares).

8.3.2.4.2.4 Management Reserve. Enter in Block 7 the total amount of management reserve remaining as of the end of the reporting period. This figure will agree with the amounts shown as management reserve in Formats 1 and 2.

8.3.2.4.2.5 Total. Enter in Column (16) of Block 8 the sum of Column (16) of Block 6.c (PMB (End of Period)) and Column (16) of Block 7 (Management Reserve). This amount should be the same as that shown on the Total line (Block 8.g) in Column (14) on Format 1.

8.3.2.4.3 Column (2) - BCWS - Cum To Date. On the PMB (Beginning of Period) line (Block 6.a), enter the cumulative BCWS as of the first day of the reporting period. This should be the same number reported as BCWS - Cum To Date on the Total line (Column (7) of Block 8.g) of Format 1 of the previous CPR. On the PMB (End of Period) line (Block 6.c), enter the cumulative BCWS as of the last day of the reporting period. This should be the same number reported as BCWS - Cum to Date on the Total line (Column (7) of Block 8.g) of Format 1 for this CPR.

8.3.2.4.4 Column (3) - BCWS For Report Period. On the PMB (Beginning of Period) line (Block 6.a), enter the BCWS planned for the reporting period. This should be the number in Column (4) on the PMB (End of Period) line (Block 6.c) on the preceding month's report.

8.3.2.4.5 Columns (4) Through (14). Enter the names of the next six months in the headings of Columns (4) through (9) of Block 6, and the names of the appropriate periods in the headings of Columns (10) through (14). In the PMB (Beginning of Period) line (Block 6.a), enter the BCWS projection reported in the previous CPR as PMB (End of Period) (Block 6.c). In the PMB (End of Period) line (Block 6.c) of this report, enter the projected BCWS (by month for six months and by periodic increments thereafter, or as negotiated with the procuring activity) for the remainder of the contract. The time-phasing of each item listed in Column (1) of Block 6.b need not be shown in Columns (4) through (14).

8.3.2.4.6 Column (15) - Undistributed Budget. On the PMB (Beginning of Period) line (Block 6.a), enter the number from Column (15) on the PMB (End of Period) line (Block 6.c) from the preceding

report. On the PMB (End of Period) line, enter the undistributed budget shown in Column (14) of Block 8.d on Format 1 of this report.

8.3.2.4.7 Column (16) - Total Budget. On the PMB (Beginning of Period) line (Block 6.a) enter the number from Column (16) on the PMB (End of Period) line (Block 6.c) from the preceding report. In the section where baseline changes that occurred during the period are listed (Column (1) of Block 6.b), enter the amount of each of the changes listed. On the PMB (End of Period) line (Block 6.c), enter the sum of the amounts in the preceding columns on this line. On the Management Reserve line (Block 7), enter the amount of management reserve available at the end of the period. On the Total line (Block 8) enter the sum of the amounts in this column on the PMB (End of Period) line and the Management Reserve line. (This should equal the amount in Block 5.f on this format and also the amount of the Total line in Column (14), Block 8.g, of Format 1.)

8.3.2.5 Format 4 - Staffing.

8.3.2.5.1 Performance Data. For those organizational categories shown in Column (1) of Block 5, equivalent months will be indicated for the current reporting period, cumulative through the current period, and forecast to completion. Direct equivalent months will be shown for each organizational category for the contract. An equivalent month is defined as the effort equal to that of one person for one month. Figures should be reported in whole numbers. (Partial months, .5 and above, will be rounded to 1; below .5 to 0.) When the Government and the contractor agree, staffing may be reported in equivalent days or hours.

8.3.2.5.1.1 Organizational Category. List the organizational categories that reflect the contractor's internal management structure in Block 5. Format 4 categories may differ from those reported in Format 2. If the Government needs different categories in Formats 2 and 4, the Format 4 categories will be addressed during negotiations. (See 7.6.7 above.)

8.3.2.5.1.2 Total Direct. In Block 6, Columns (2) through (15), enter the sum of all direct equivalent months for the organizational categories shown in Column (1).

8.3.2.5.2 Column (2) - Actual - Current Period. Enter the actual equivalent months incurred during the current reporting period.

8.3.2.5.3 Column (3) - Actual End of Current Period (Cum). Enter the actual equivalent months incurred to date (cumulative) as of the end of the report period.

8.3.2.5.4 Columns (4) Through (14) - Forecast (Non Cumulative). Enter a staffing forecast by month for a six-month period following the current period and by periodic increment thereafter, as negotiated with the procuring activity (see 7.6.4 above). The forecast will be updated at least quarterly unless a major revision to the plan or schedule has taken place, in which case forecasts will be changed for all periods involved in the report submitted at the end of the month in which the change occurred.

8.3.2.5.5 Column (15) - Forecast at Completion. Enter the estimate of equivalent months necessary for the total contract in Column (15) by organizational category. This estimate should be consistent with the most likely management estimate at completion shown in Block 6.c.1 of Format 1. Any significant change in the total number of equivalent months at completion of the contract (i.e., Column (15) Total) should be explained in Format 5.

8.3.2.6 Format 5 - Explanations and Problem Analyses.

8.3.2.6.1 General. Format 5, Explanations and Problem Analyses, is a narrative report prepared to supplement the other CPR formats. Format 5 will normally address 1) contractually required cost, schedule and estimate at completion variance analyses, 2) management reserve changes and usage, 3) undistributed budget contents, 4) differences between the best case, worst case, and most likely management estimate at completion, if any, 5) the difference between the most likely management estimate at completion and the estimate in Block 8.e of Column (15), if any, 6) significant differences between beginning of period PMB time phasing and end of period PMB time phasing in Format 3, 7) performance measurement milestones that are inconsistent with contractual milestones (Over Target Schedule), 8) formal reprogramming (Over Target Baseline) implementation details, and 9) significant staffing estimate changes in Format 4. However, any topic relevant to contract cost, schedule or technical performance can be addressed in this format.

8.3.2.6.2 Total Contract. Provide a summary analysis, identifying significant problems affecting performance. Indicate corrective actions required, including Government action where applicable. Significant changes since the previous report should be highlighted. Discuss any other issues affecting successful attainment of contract cost, schedule or technical objectives which the contractor deems significant or noteworthy. This section should be brief, normally one page.

8.3.2.6.3 Cost and Schedule Variances. Explain all variances which exceed specified variance thresholds. Explanations of variances must clearly identify the nature of the problem, significant reasons for cost or schedule variance, effect on the immediate task, impact on the total contract, and the corrective action taken or planned. Explanations of cost variances should identify amounts attributable to rate changes separately from amounts applicable to hours worked; amounts attributable to material price changes separately from amounts applicable to material usage; and amounts attributable to overhead rate changes separately from amounts applicable to overhead base changes or changes in the overhead allocation basis. To reduce the volume of variance analysis, the Government may allow the contractor to refer to a prior CPR's variance analysis explanations if the explanation for the current CPR's variance has not changed significantly.

8.3.2.6.3.1 Setting Variance Analysis Thresholds. The Government should require the minimum amount of variance analysis in Format 5 which satisfies its management information needs. Excessive variance analysis is burdensome and costly, and detracts from the CPR's usefulness, while too little information is equally undesirable. The contract should include a provision to review cost and schedule variance analysis thresholds periodically, normally semiannually, to determine if they continue to meet the Government's information needs. If they do not, the thresholds should be changed at no cost to the Government.

8.3.2.6.3.2 Identifying Significant Variances. There is no prescribed basis for identifying which cost and schedule variances are to be explained in Format 5. The Government may specify any one of several ways to identify such variances, including, but not limited to the following:

8.3.2.6.3.2.1 Fixed Number of Variances. Specify a number of significant variances. These variances can be either current month, cumulative, or at-completion. Any number of significant variances may be selected, but the Government should be careful to select only the number that it feels are necessary.

8.3.2.6.3.2.2 Percentage or Dollar Thresholds. Select variances based on percentage or dollar thresholds. Significant schedule variances are identified based on their size or percentage to Budgeted Cost for Work Scheduled, and significant cost variances are identified based on their size or percentage to Budgeted Cost for Work Performed. For example, all current month, cumulative or

at-completion variances greater than 10% or \$500K may be selected for analysis. This method usually results in a larger number of variances requiring reporting. Consequently, the thresholds should be reviewed periodically to ensure they continue to provide a reasonable amount of useful information.

8.3.2.6.3.2.3 Specific Variances. Select variances for analysis only after reviewing Formats 1 or 2. Under this method, the CPR is delivered promptly after the contractor's accounting period ends with all required information in Formats 1 through 5 except variance analyses. Once the Government has reviewed this performance data, it selects specific variances for analysis. This method may be the most efficient in that the Government can pinpoint areas to be analyzed. It is also the most flexible because there may be some months where a review of the performance data yields few or no variance analysis candidates. However, this method should only be used if the Government is certain it has sufficient resources to review the CPR early and select variances each month.

8.3.2.6.3.2.4 No Variance Analysis Thresholds Specified. If the contract does not specify variance analysis thresholds, the contractor will determine what significant variance explanations are reported. These explanations should focus on 1) areas where the Government should be informed of developing issues or problems, 2) areas of identified program risk or management interest, or 3) areas of significantly unfavorable cost or schedule performance.

8.3.2.6.4 Other Analyses. In addition to variance explanations, the following analyses are mandatory:

8.3.2.6.4.1. Management Estimate at Completion. If the best or worst case management estimates at completion differ from the most likely estimate, the contractor must provide a brief explanation of the difference. Also, if the most likely management estimate at completion differs from the total entered in Column 15 of Format 1 or 2, the contractor must explain the difference. The explanations should focus on such areas as differences in underlying assumptions; a knowledgeable, realistic risk assessment; projected use of management reserve; estimate for undistributed budget; and higher management knowledge of current or future contract conditions.

8.3.2.6.4.2 Undistributed Budget. Identify the effort to which the undistributed budget applies. Also, explain any variance between the undistributed budget and the estimate for undistributed budget in Formats 1 and 2.

8.3.2.6.4.3 Management Reserve Changes. Identify the sources and uses of management reserve changes during the reporting period. For management reserve uses, identify the WBS and organizational elements to which applied, and the reasons for application.

8.3.2.6.4.4 Baseline Changes. Explain reasons for significant shifts in time-phasing of the PMB shown on Format 3.

8.3.2.6.4.5 Staffing Level Changes. Explain significant changes in the total staffing estimate at completion shown on Format 4. Also, explain reasons for significant shifts in time-phasing of planned staffing.

8.3.2.6.5 Formal Reprogramming (Over Target Baseline). If the difference shown in Block 5.g on Format 3 becomes a negative value or changes in value, provide information on the following:

8.3.2.6.5.1 Authorization. Procuring activity authorization for the baseline change which resulted in negative value or change.

8.3.2.6.5.2 Reason. A discussion of the reason(s) for the change.

8.3.2.6.5.3 CPR Reporting. A discussion of how the change affected CPR reporting (i.e., amount allocated to management reserve, adjustments to cost or schedule variances, etc.).

8.3.2.6.5.4 Schedule. Indicate whether the contract schedule was retained for performance measurement or was replaced with a schedule that exceeds the contractual schedule (Over Target Schedule).

8.3.2.6.6 Over Target Schedule. If a performance measurement schedule exceeding the contractual schedule (Over Target Schedule) has been implemented, provide a discussion of the pertinent information, such as authorization, reasons and significant dates

CLASSIFICATION (When filled in)

COST PERFORMANCE REPORT FORMAT 1 - WORK BREAKDOWN STRUCTURE

DOLLARS IN

Form Approved
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 3.1 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THIS ADDRESS. SUBMIT COMPLETED FORMS IN ACCORDANCE WITH CONTRACTUAL REQUIREMENTS.

1. CONTRACTOR	2. CONTRACT		3. PROGRAM	4. REPORT PERIOD
a. NAME	a. NAME		a. NAME	a. FROM (YYYYMMDD)
b. LOCATION (Address and ZIP Code)	b. NUMBER		b. PHASE (X one) <input type="checkbox"/> RDT&E <input type="checkbox"/> PRODUCTION	b. TO (YYYYMMDD)
	c. TYPE	d. SHARE RATIO		

5. CONTRACT DATA

a. QUANTITY	b. NEGOTIATED COST	c. EST. COST AUTHORIZED UNPRICED WORK	d. TARGET PROFIT/FEE	e. TARGET PRICE	f. ESTIMATED PRICE	g. CONTRACT CEILING	h. ESTIMATED CONTRACT CEILING
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6. ESTIMATED COST AT COMPLETION

	MANAGEMENT ESTIMATE AT COMPLETION (1)	CONTRACT BUDGET BASE (2)	VARIANCE (3)	a. NAME (Last, First, Middle Initial)	b. TITLE
a. BEST CASE				c. SIGNATURE	d. DATE SIGNED (YYYYMMDD)
b. WORST CASE					
c. MOST LIKELY					

8. PERFORMANCE DATA

[illegible]

CLASSIFICATION (When filled in)

COST PERFORMANCE REPORT FORMAT 2 - ORGANIZATIONAL CATEGORIES

DOLLARS IN

Form Approved
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average .6 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THIS ADDRESS. SUBMIT COMPLETED FORMS IN ACCORDANCE WITH CONTRACTUAL REQUIREMENTS.

1. CONTRACTOR	2. CONTRACT		3. PROGRAM	4. REPORT PERIOD
a. NAME	a. NAME		a. NAME	a. FROM (YYYYMMDD)
b. LOCATION (Address and ZIP Code)	b. NUMBER		b. PHASE (X one) <input type="checkbox"/> RDT&E <input type="checkbox"/> PRODUCTION	b. TO (YYYYMMDD)
	c. TYPE	d. SHARE RATIO		

5. PERFORMANCE DATA

[illegible]

CLASSIFICATION (When filled in)

COST PERFORMANCE REPORT FORMAT 3 - BASELINE

DOLLARS IN

Form Approved

OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 6.3 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THIS ADDRESS. SUBMIT COMPLETED FORMS IN ACCORDANCE WITH CONTRACTUAL REQUIREMENTS.

1. CONTRACTOR	2. CONTRACT		3. PROGRAM	4. REPORT PERIOD
a. NAME	a. NAME		a. NAME	a. FROM (YYYYMMDD)
b. LOCATION (Address and ZIP Code)	b. NUMBER		b. PHASE (X one) <input type="checkbox"/> RDT&E <input type="checkbox"/> PRODUCTION	b. TO (YYYYMMDD)
	c. TYPE	d. SHARE RATIO		

5. CONTRACT DATA

a. ORIGINAL NEGOTIATED COST	b. NEGOTIATED CONTRACT CHANGES	c. CURRENT NEGOTIATED COST (a. + b.)	d. ESTIMATED COST OF AUTHORIZED UNPRICED WORK	e. CONTRACT BUDGET BASE (c. + d.)	f. TOTAL ALLOCATED BUDGET	g. DIFFERENCE (e. - f.)
h. CONTRACT START DATE (YYYYMMDD)	i. CONTRACT DEFINITIZATION DATE (YYYYMMDD)	j. PLANNED COMPLETION DATE (YYYYMMDD)	k. CONTRACT COMPLETION DATE (YYYYMMDD)	l. ESTIMATED COMPLETION DATE (YYYYMMDD)		

6. PERFORMANCE DATA

[illegible]

CLASSIFICATION (When filled in)

COST PERFORMANCE REPORT FORMAT 4 - STAFFING

Form Approved

OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 5.0 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THIS ADDRESS. SUBMIT COMPLETED FORMS IN ACCORDANCE WITH CONTRACTUAL REQUIREMENTS.

1. CONTRACTOR	2. CONTRACT		3. PROGRAM	4. REPORT PERIOD
a. NAME	a. NAME		a. NAME	a. FROM (YYYYMMDD)
b. LOCATION (Address and ZIP Code)	b. NUMBER		b. PHASE (X one) <input type="checkbox"/> RDT&E <input type="checkbox"/> PRODUCTION	b. TO (YYYYMMDD)
	c. TYPE	d. SHARE RATIO		

5. PERFORMANCE DATA (All figures in whole numbers)

[illegible]

CLASSIFICATION (When filled in)

**COST PERFORMANCE REPORT
FORMAT 5 - EXPLANATIONS AND PROBLEM ANALYSES**

Form Approved
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 36.0 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THIS ADDRESS. SUBMIT COMPLETED FORMS IN ACCORDANCE WITH CONTRACTUAL REQUIREMENTS.

1. CONTRACTOR	2. CONTRACT	3. PROGRAM	4. REPORT PERIOD
a. NAME	a. NAME	a. NAME	a. FROM (YYYYMMDD)
b. LOCATION (Address and ZIP Code)	b. NUMBER		b. TO (YYYYMMDD)
	c. TYPE	d. SHARE RATIO	
		b. PHASE (X one)	
		<input type="checkbox"/> RDT&E	<input type="checkbox"/> PRODUCTION

5. EVALUATION

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: Workforce Reports		2. Date of Current Version 01/01/04		3a. DRD No. B-PC-03		3b. RFP/Contract No. NNJ04AA02C	
1b. Data Type: 3							
4. Use (Define need for, intended use of, and/or anticipated results of data) To provide workforce information by geographic location.						5. DRD Category — Technical X Administrative — SR&QA	
6. References (SOW, Clause, etc.) SOW 1.2.3.3				7. Interrelationships (e.g., with other DRDs) All PC and PM DRDs			

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

SCOPE: The reports provide workforce data by geographic location. There are two types of reports: 1) a Monthly Workforce Report by location, and 2) an As Requested Workforce Report.

CONTENT: The monthly workforce report should provide Equivalent Personnel (EPs) by location, specifically on or off site (JSC), and by State for workforce outside of the Clear Lake area. The data should be reconcilable to other financial deliverables. The content of the As Requested Workforce Report will vary based on specific direction provided by NASA Headquarters to support congressional inquiries. Its most common form is an annual request to provide workforce by Zip Code.

FORMAT: Specific formatting to be tailored by LO/Contractor.

9. OPR: OG

10. FIRST SUBMISSION DATE: Ten (10) Workdays after initial month end

Frequency Of Submission: Monthly for the Monthly Workforce Report, and as directed for the As Requested Workforce Report.

Additional Submissions:

11. MAINTENANCE: Changes shall be incorporated by change page or complete reissue.

12. COPIES/DISTRIBUTION: Data Transmittal form (DTF) notification:

OL/Data Management	1 Copy
Original/record (hard copy) to the following:	
LW	1 Copy
LO	2 Copies
OG/Assessment Office	1 Copy
Contracting Officer	1 Copy
Contracting Officer's Technical Representative (COTR)	1 Copy
Electronic copy: to a Program authorized repository (PALS or equivalent)	
LW	1 Copy
LO	1 Copy
OG	1 Copy
Contracting Officer	1 Copy
Contracting Officer's Technical Representative (COTR)	1 Copy

13. REMARKS:

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Language Training Curricula for NASA/JSC Contractor Programs 1b. Data Type: 1	2. Date of Current Version January 2003	3a. DRD No. B-II-01	3b. RFP/Contract No. NNJ04AA02C
4. Use (Define need for, intended use of, and/or anticipated results of data) For use by NASA technical personnel to identify and review curricula programs			5. DRD Category ___ Technical _x Administrative ___ SR&QA
6. References (SOW, Clause, etc.) 1.5.1.3		7. Interrelationships (e.g., with other DRDs)	

8. PREPARATION INFORMATION:

Language training curricula shall be proficiency oriented and communicative in nature, and focus on relevant thematic content areas in two broad categories: "every day" subjects and technical subjects. These categories will be further broken down into subject areas relevant to the student's course of study. For example, astronauts assigned to ISS flights might study Soyuz systems, Russian cosmonauts might study Shuttle systems, and Center Wide students might study ways of using transportation in Moscow; all students need a mix of technical and every day thematic content. Thematic content will be furnished to NASA Language Project Managers for approval, additions, or deletions. Further, curricula will provide language content in the form of specific pronunciation and grammatical areas for each level of Russian or English course or student, and allow for flexibility in awareness of student strategies and tactics.

Curricula will include specific skills such as oral communication, listening comprehension, reading, and writing which will occur as situated content. Curricula will specify major teaching methods or techniques as they relate to communicative process, and indicate appropriate points for assessment. Curricula will be written such that they are consistent with current, generally accepted curricula theory in the field of language teaching.

The language curricula shall move the students at an accepted pace of language acquisition standard among U.S. government programs (as indicated in the ASTM standards) while accounting for attrition caused by the part-time language study of NASA personnel and contractors, and other factors such as language learning aptitude. As the language training programs administered by the Contractor are established and materials become available, they must also be incorporated in the curricula. Once curriculum(s) are established and approved by the government, the Contractor shall keep them current with program needs.

The language training curricula shall provide for students (either tutorial or group sessions) at all levels of the ILR standards and definitions from level 0 through level 2+ for languages other than English, and for all levels from 0 through 8 of the MELT standards for English. Curricula will support students who reach 2+ or SPL 8 in maintaining that level of language proficiency, while allowing students with sufficient time and ability to progress via individually designed programs of study.

Designing such curricula should not be interpreted as an indication by the Contractor of a "cut off" score or ultimate proficiency goal for crewmembers, but rather a feasible and flexible curricular design within the NASA training constraints. The curricula shall be delivered to NASA in English. Further explanation of the curricula design may be provided at the request of a Project Manager and delivered orally at a joint meeting of the Project Managers and the Contractor curricula designers.

Updates:

NASA Project Managers shall approve updates to the overall language-training curriculum, but individual lesson plans shall be adjusted to specific needs of individual students as necessary.

Recipient:

The NASA Language Project Managers will receive and approve the completed curriculums, and subsequent upgrades to those products.

FORMAT: Electronic MS Office 97 or higher in English

9. OPR: AH and DT

10. FIRST SUBMISSION DATE: Notify NASA within 30 days of contract start of any planned changes.

Frequency Of Submission: As required

Additional Submissions: As required

11. MAINTENANCE: Annually or as required

12. COPIES/DISTRIBUTION:

1 record (hard copy): OL2/Data Management

1 copy (electronic): Each NASA OPR

13. REMARKS: n/a

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Language Training Shared Materials "File Cabinet" 1b. Data Type: Type 3	2. Date of Current Version January 2003	3a. DRD No. B-II-02	3b. RFP/Contract No. NNJ04AA02C
4. Use (Define need for, intended use of, and/or anticipated results of data) For use by NASA technical personnel to identify and review shared materials for language training			5. DRD Category ___ Technical _x Administrative ___ SR&QA
6. References (SOW, Clause, etc.) 1.5.1.3		7. Interrelationships (e.g., with other DRDs)	

8. PREPARATION INFORMATION:

A language training storage mechanism for all MIC administered NASA language-training programs shall be maintained by the Contractor electronically on a NASA provided server, and in hard copy if the material is not suitable for electronic storage. The storage mechanism shall include all syllabi, indices of material locations (e.g. videotapes, periodicals), lessons, and instructional materials that lend themselves to storage. The storage mechanism must be accessible by all faculty and language program managers, and authors of materials must be identified in order of origination (e.g. the first initials are the originator, the next set to indicate someone made significant changes, etc.). Maintenance and updates to the syllabi shall be filed for each tutorial student and each group instruction opportunity and training period.

Frequency:

Updates to the archive shall be continuous as the faculty develops new materials for instruction.

FORMAT: As applicable

9. OPR: AH and DT

10. FIRST SUBMISSION DATE:

Frequency Of Submission: Syllabi delivered for each tutorial student or group training period

Additional Submissions: As required

11. MAINTENANCE: as needed

12. COPIES/DISTRIBUTION:

1 record (hard copy materials): JLEC

1 copy (electronic): JLEC NASA server

13. REMARKS: n/a

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Training Report Deliverable	2. Date of Current Version January 2004	3a. DRD No. B-II-03	3b. RFP/Contract No. NNJ04AA02C
1b. Data Type: 3			
4. Use (Define need for, intended use of, and/or anticipated results of data) For use by NASA technical personnel to evaluate language training progress			5. DRD Category ___ Technical __x Administrative ___ SR&QA
6. References (SOW, Clause, etc.) SOW paragraph 1.5.1.3		7. Interrelationships (e.g., with other DRDs)	

8. PREPARATION INFORMATION:

The report shall cover the following:

- Any student feedback not included on evaluation forms.
- A table showing the location of the following records: syllabi (electronic and paper copies); lesson plans (electronic monthly samples and full paper copies of each contact session); the electronically stored Student Progress Matrix which indicates the number of hours attended by each student for each month and their current and former assessment levels.
- Specific topics as directed by the NASA Language Project Managers.
- Areas covered in the current FYI LT Status report, which are: accomplishments/progress, issues, current events, short term goals, long term goals, and corrective actions.
- Student attendance rosters and evaluations.

FORMAT: As defined in #8

9. OPR: AH and DT

10. FIRST SUBMISSION DATE: March 31, 2004

Frequency Of Submission: quarterly

Additional Submissions: as requested

11. MAINTENANCE: weekly

12. COPIES/DISTRIBUTION:

1 record (hard copy materials): to each NASA OPR

1 copy (electronic materials): JLEC NASA Server and each NASA OPR

13. REMARKS: n/a

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Student Records	2. Date of Current Version January 2004	3a. DRD No. B-II-04	3b. RFP/Contract No. NNJ04AA02C
1b. Data Type: 3			
4. Use (Define need for, intended use of, and/or anticipated results of data) For use by NASA technical personnel to identify and review student progress			5. DRD Category ___ Technical _x Administrative ___ SR&QA
6. References (SOW, Clause, etc.) 1.5.1.3		7. Interrelationships (e.g., with other DRDs)	

8. PREPARATION INFORMATION:

The Contractor shall maintain formal student records for all students being instructed by Contractor personnel. Student records shall include a folder or binder with each class designation or student name. In the folder there will be lesson plans for each contact hour indicating the instructor, active and inactive course syllabi (in the case of long term students, there may be more than one inactive folder and one active folder). There may also be selected handouts and homework assignments. The contact hours record shall be maintained in the Student Progress Matrix, which will be available electronically. Records of informal assessments performed by Contractor personnel with written comments will be maintained and will be organized by student or class.

FORMAT: Electronic or hardcopy as defined in #8

9. OPR: AH/NASA Language Project Manager and DT

10. FIRST SUBMISSION DATE:

Frequency Of Submission: as requested by NASA OPR

Additional Submissions:

11. MAINTENANCE: within 1 week of class attendance

12. COPIES/DISTRIBUTION:

1 record (hard copy): JLEC Files

1 copy (electronic): JLEC NASA Server

13. REMARKS: n/a

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Language Program Plan for Integration with Colleagues in Russia	2. Date of Current Version January 2004	3a. DRD No. B-II-05	3b. RFP/Contract No. NNJ04AA02C
1b. Data Type: 2 4. Use (Define need for, intended use of, and/or anticipated results of data) For use by NASA technical personnel to identify and review the language program			5. DRD Category <input type="checkbox"/> Technical <input checked="" type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References (SOW, Clause, etc.) 1.5.1.3		7. Interrelationships (e.g., with other DRDs) Language Training Curricular for NASA/JSC Contractor Programs (DRD-B-II-02)	

8. PREPARATION INFORMATION:

A Language Training Plan for integration of the Contractor's Russian language training programs in Russia and the Contractor's Russian language training program at NASA shall be established and maintained by the Contractor. The position of curricula integrator, or Russian Language Training Liaison, shall be established. The Contractor will send staff members including the Russian Language Training Liaison to Russia, as needed, minimum once per year. Final integration and use of combined materials and curricula among Russian teachers employed by the Contractor shall proceed over the next year.

The Liaison, and other administrative personnel and/or instructors as deemed necessary by the Contractor, shall travel to Russia for the purpose of facilitating the integration of the Contractor's NASA Russian Program and Russian programs in Star City not associated with the Contractor. The Contractor will evidence this facilitation by documenting meetings and discussions with Russian teaching colleagues and the results of those events, including any shared curricula, lessons, or materials that may be agreed upon.

The Contractor shall work to facilitate additional integrated English language training with GCTC and Energia/TsUP. Assuming that NASA arranges this with the Russian side, this will be achieved by working intensively with the ESL instructors at GCTC, sharing materials, and otherwise working to integrate the programs. Additionally, the contractor will send staff members to provide assistance to the existing English program at TsUP in the form of materials and consulting (again assuming that NASA arranges this with the Russian side). The Contractor shall work with the Russian and English teachers not employed by the Contractor in order to facilitate the sharing of materials, the development of coordinated syllabi and lessons for advanced students, and the development of the advanced student curriculum. The Contractor will evidence this shared work by means of records regarding student progress and areas for improvement that have been sent to colleagues in Russia with whom students are shared.

The NASA Language Project Managers shall evaluate progress and determine reasonable deadlines for delivery and use of the integrated language-training program between the Contractor NASA programs and Contractor language programs in Russia. They will also evaluate the progress of the Russian Training Liaison in working to facilitate an integrated program between Contractor NASA programs and non-Contractor Russian language programs, and the progress of the Contractor English as a Second Language administrator and instructors in working to facilitate an integrated program with non-Contractor English language programs. All protocol agreements between the Russian and American sides will be signed by the NASA Language Training Project Manager(s). The completed, integrated Contractor language training programs shall be incorporated in the language curricula (DRD-B-II-02).

FORMAT: Electronic preferred

9. OPR: AH and DT

10. FIRST SUBMISSION DATE: within 30 days of contract start

Frequency Of Submission: annual

Additional Submissions:

11. MAINTENANCE: Annual

12. COPIES/DISTRIBUTION:

1 record (hard copy): To each NASA OPR

1 record (electronic): To JLEC NASA Server

13. REMARKS:

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: IT Management Plan	2. Date of Current Version 12/02/02	3a. DRD No. B-IT-01	3b. RFP/Contract No. NNJ04AA02C
1b. Data Type: 1 4. Use (Define need for, intended use of, and/or anticipated results of data) The Contractor shall provide plans to coordinate and execute all technical and administrative tasks for all management activities required to satisfy the requirements of this contract.			5. DRD Category <input type="checkbox"/> Technical <input checked="" type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References (SOW, Clause, etc.) 1.4.1		7. Interrelationships (e.g., with other DRDs)	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

SCOPE:

The Management Plan shall include the plans for coordination and execution all IT tasks.

CONTENT:

The Management Plan shall be an umbrella document, which encompasses and integrates all IT management activities. As a minimum, the Management Plan shall cover:

1. The significant policies and plans of all aspects of reportable IT.
2. Levels of approvals.
3. Flow of authority.
4. External interfaces with the Government and other contractors.
5. The relationship between and integration of IT DRDs to the overall management of the IT content.

FORMAT: Contractor supplied format, compatible with ISS document standards

9. OPR: MIO

10. FIRST SUBMISSION DATE: Within 30 days of contract start

Frequency Of Submission: as needed

Additional Submissions: The Management Plan shall be updated to reflect changes that occur after its initial publication.

11. MAINTENANCE:

12. COPIES/DISTRIBUTION:

Data Transmittal form (DTF) notification:

OL/Data Management 1 Copy

Original/record (hard copy) to the following:

Contracting Officer 1 Copy

Contracting Officer's Technical Representative (COTR) 1 Copy

Electronic copy: to a Program authorized repository (PALS or equivalent)

13. REMARKS:

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Information Technology (IT) Security Plan and Reports 1b. Data Type: 1	2. Date of Current Version 01/01/04	3a. DRD No. B-IT-02	3b. RFP/Contract No. NNJ04AA02C
4. Use (Define need for, intended use of, and/or anticipated results of data) To meet IT security reporting requirements			5. DRD Category <input checked="" type="checkbox"/> Technical <input type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References (SOW, Clause, etc.) SOW 1.4.1 Clause I.5 NPG 2810.1 NASA IT Security Program JPG 2810.1 JSC IT Security Handbook NASA PAN 03-16 System Administrator Security Certification Program		7. Interrelationships (e.g., with other DRDs) B-IT-01	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

SCOPE: All contracts that purchase, lease, network to, or otherwise utilize government-funded IT (as defined by the Clinger-Cohen Act of 1996) must implement the SSP50222 ISS Program Capital Investment Process.

CONTENT:

SECURITY PLAN

This plan shall contain the overall security policies, as required, for each system and application in a form compatible with the NASA Information Technology System (ITS) Security Program and the security and policies of the Center at which the work is being performed. For work being performed at JSC or at remote contractor sites not located at a NASA field center, the plan will comply to JPG 2810.1 JSC IT Security Handbook.

SECURITY STATUS REPORT

This report shall document the security status of all ITS, including any suspected security violations or infractions.

INFORMATION ON EMPLOYEES IN SENSITIVE AIS POSITIONS/ASSIGNMENTS REPORT

The Information on Employees in Sensitive ITS Positions/Assignments Report shall provide information for personnel screening as required by the JPG 2810.1.

SYSTEM ADMINISTRATOR SECURITY CERTIFICATION PROGRAM:

This Agency-wide program applies to all lead system administrators administering systems on NASA IP address space.

All individuals who perform tasks as a system administrator or have authority to perform tasks normally performed by system administrator shall be required to demonstrate knowledge appropriate

to those tasks. This demonstration, referred to as the NASA System Administrator Security Certification, is a NASA funded two-tier assessment to verify that system administrators are able to –

1. Demonstrate knowledge in system administration for the operating systems for which they have responsibility.
2. Demonstrate knowledge in the understanding and application of Network and Internet Security.

Certification is granted upon achieving a score above the certification level on both an Operating System test and the Network and Internet Security Test. The Certification earned under this process will be valid for three years. The criteria for this skills assessment has been established by the NASA Chief Information Officer. The objectives and procedures for this certification can be obtained by contacting the IT Security Awareness and Training Center at (216) 433-2063.

A system administrator is one who provides IT services, network services, files storage, web services, etc. to someone else other than themselves and takes or assumes the responsibility for the security and administrative controls of that service or machine. A lead system administrator has responsibility for information technology security (ITS) for multiple computers or network devices represented within a system; ensuring all devices assigned to them are kept in a secure configuration (patched/mitigated); and ensuring that all other system administrators under their lead understand and perform ITS duties. An individual that has full access or arbitrate rights on a system or machine that is only servicing themselves does not constitute a "system administrator" since they are only providing or accepting responsibility for their system. An individual only servicing their own IT system, is not required to obtain a System Administrator Certification.

Reference Documents:

The IT Security requirements are documented in NPG and JPG 2810.1 (for JSC and remote contract sites)

FORMAT: As defined in the JPG 2810.1

9. OPR: OL/Chief Information Officer

10. FIRST SUBMISSION DATE: Within thirty (30) days after contract award.

Frequency Of Submission: As defined in JPG 2810.1

Additional Submissions: As defined in JPG 2810.1

11. MAINTENANCE: As defined in the JPG 2810.1

12. COPIES/DISTRIBUTION:

1 original/record (hard copy): OL/ Data Management

1 electronic copy: Program Authorized Repository

13. REMARKS: The final plan, as approved by the Contracting Officer, shall be incorporated in the contract as Attachment J-6

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: User Guides for Mission Integration Database Applications System (MIDAS)	2. Date of Current Version 1/23/03	3a. DRD No. B-MI -01	3b. RFP/Contract No. NNJ04AA02C
1b. Data Type: 3 4. Use (Define need for, intended use of, and/or anticipated results of data) User guides are required for major functional areas of the software tool for training of new users and reference purposes for all users.			5. DRD Category <input checked="" type="checkbox"/> Technical <input type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References (SOW, Clause, etc.) SOW paragraph, 4.1.1.3.4		7. Interrelationships (e.g., with other DRDs) DRD B-MI-02: Requirements documents for the Mission Integration Database Applications System (MIDAS) DRD B-MI-03: Design document for the Mission Integration Database Applications System (MIDAS)	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

SCOPE:

User guides for each major functional area of MIDAS will be distributed to all MIDAS users of that function and be available upon request for new users. User guide should provide sufficient information for a new user to understand the use of the software tool.

CONTENT:

User guide(s) will provide a description of the user interface for the particular function being described. All capabilities of the specific function should be described from the user's standpoint. All information fields accessible to the user should be defined, along with the users access capability (read only or read/write). User guides should include the following areas and any new functions added to MIDAS:

- MIDAS User Guide – General user information across MIDAS tool.
- MIDAS Flight Lead Users Guide - Describes the functions available in MIDAS to support manifest development and maintenance.
- Manifest Request Processing Users Guide – Describes the functions available to support the submission and processing of manifest requests.
- Cargo Integration Users Guide – Describes the functions applicable to the Cargo Integration function
- MIDAS Anonymous WEB Page Information – Describes the reporting functions provide for users who access the tool without a defined user account.
- MIDAS Part Catalog Users Guide – Describes the functions available for use of the MIDAS part catalog tables.
- MRTS Loader File Description/Sample Loader – Describes the method and format for creating external files which can be loaded into the Manifest Request function for automatic generation of a request.
- IMS/HAZARD/TOXICITY Users Guide – Describes the function applicable to users who provide either IMS barcode information or hazard/toxicity information to the tool
- Requirements Request Users guide – Describes the function used to support submission and processing of mission requirements.

- Bar Code, Inventory Tracking System Users Guide – Describes the functions used for submission of bar code label requests, processing of requests, and acquisition of bar codes and serial number information.

FORMAT: Electronically maintained and available via the MIDAS web interface and in PALS.

9. OPR: OC

10. FIRST SUBMISSION DATE: with first revision to tool

Frequency Of Submission: Document(s) should be updated when new requirements are implemented, design changes occur, or to correct deficiencies in the guide.

Additional Submissions:

11. MAINTENANCE: As required when new requirements are implemented, design changes occur, or deficiencies need correction.

12. COPIES/DISTRIBUTION:

1 original/record copy to OL/ Data Management

1 electronic copy to ISS Program authorized repository (PALS or equivalent)

13. REMARKS:

Notification of updates should be sent to OPR and all users of the affected functions.

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: Requirements Document for the Mission Integration Database Applications System (MIDAS)	2. Date of Current Version 1/23/03	3a. DRD No. B-MI-02	3b. RFP/Contract No. NNJ04AA02C
1b. Data Type: 1			5. DRD Category <input checked="" type="checkbox"/> Technical <input type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
4. Use (Define need for, intended use of, and/or anticipated results of data) Document will be used to define the functional requirements for the MIDAS. The document will be used to define software changes authorized by the ISS program.			
6. References (SOW, Clause, etc.) SOW paragraph, 4.1.1.3.4		7. Interrelationships (e.g., with other DRDs) DRD B-MI-01: User Guides for Mission Integration Database Applications System (MIDAS) DRD B-MI-03: Design document for the Mission Integration Database Applications System (MIDAS)	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

SCOPE:

Document should include functionality of all of the MIDAS application.

CONTENT:

Document shall contain all software requirements implemented in the MIDAS tool. Document shall also contain all requirements authorized for delivery by NASA, but not yet implemented. Requirements shall be organized by functional area within the tool. The document shall indicate when each requirement was implemented or is planned for implementation (if scheduled) using a software version number or similar indicator.

FORMAT: Electronically maintained and available in PALS (or PALS replacement).

9. OPR: OC

10. FIRST SUBMISSION DATE: N/A

Frequency Of Submission: Document shall be updated & submitted at least once per major software release

Additional Submissions:

11. MAINTENANCE: Existing document should be maintained or replacement document produced.

12. COPIES/DISTRIBUTION:

1 original/record copy to OL /Data Management

1 electronic copy to ISS Program authorized repository (PALS or equivalent)

13. REMARKS:

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: Design Document for the Mission Integration Database Applications System (MIDAS) 1b. Data Type: 2	2. Date of Current Version 1/23/03	3a. DRD No. B- MI-03	3b. RFP/Contract No. NNJ04AA02C
4. Use (Define need for, intended use of, and/or anticipated results of data) Document will be used to define the implementation and software technology used to develop the application.			5. DRD Category <input checked="" type="checkbox"/> Technical <input type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References (SOW, Clause, etc.) SOW paragraph, 4.1.1.3.4		7. Interrelationships (e.g., with other DRDs) DRD B-MI-01: User Guides for Mission Integration Database Applications System (MIDAS) DRD B-MI-02: Requirements document for the Mission Integration Database Applications System (MIDAS)	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

SCOPE:

Document should cover all functionality of the MIDAS tool.

CONTENT:

Document shall describe the method and techniques used by the software developers to implement the defined requirements for the application. Sufficient detail shall be provided to allow new software developers to understand the implementation used.

FORMAT: Electronically maintained and available in PALS.

9. OPR: OC

10. FIRST SUBMISSION DATE: with first software release

Frequency Of Submission: at least once per major software release

Additional Submissions:

11. MAINTENANCE: as needed

12. COPIES/DISTRIBUTION:

1 original/record copy to OL Data Management

1 electronic copy to ISS Program Office repository (PALS or equivalent)

13. REMARKS:

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: Discrepancy and New Requirement tracking for MIDAS tool	2. Date of Current Version 1/23/03	3a. DRD No. B- MI-04	3b. RFP/Contract No. NNJ04AA02C
1b. Data Type: 2			
4. Use (Define need for, intended use of, and/or anticipated results of data) Provide government insight into user problems and criticality with the MIDAS system and proposed changes to the system.			5. DRD Category <input checked="" type="checkbox"/> Technical <input type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References (SOW, Clause, etc.) SOW paragraph, 4.1.1.3.4		7. Interrelationships (e.g., with other DRDs)	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

SCOPE: System should track problems and new requirements for all functionality of the MIDAS tool.

CONTENT: Three reports are required.

1. Report of any tool discrepancies (non-compliance with requirement) including:
 - Name and contact information for person reporting discrepancy, including date of report
 - Description of problem/change in detail.
 - Proposed resolution of problem
 - Functional area of tool affected
 - Prioritization of implementation of correction
 - Date of planned/actual correctionReport should be available sorted by prioritization, implementation date, or functional area
2. Report of new software requirements should include:
 - Name and contact information for person request requirement or change, including date or request.
 - Brief description of desired change.
 - Functional area of tool affected, if any.
 - Prioritization of implementation of new/changed requirement
 - Date of planned/actual implementationReport should be available sorted by prioritization, implementation date, or functional area
3. Graphical chart indicating status of open tool discrepancies. Chart should show, over a specified calendar period, a running tabulation of the uncorrected tool discrepancies. The discrepancies should be grouped into categories of critical, major, and minor.
 - a. Critical – A discrepancy that impacts production of required products. No workaround for the problem has been identified.
 - b. Major - A discrepancy that impacts production of required products. A workaround procedure has been identified, however the procedure requires substantial increase in resources to implement or will result in a significant delay in production of products.
 - c. Minor – All other discrepancies.

FORMAT: Microsoft Office compatible electronic format

9. OPR: OC

10. FIRST SUBMISSION DATE: Reports 1 and 3, 30 days after contract start, Report 2, 90 days after contract start

Frequency Of Submission:

Report 1 and 3 to be provided monthly
Report 2 to be provided quarterly

Additional Submissions:

11. MAINTENANCE: weekly

12. COPIES/DISTRIBUTION:

1 original/record copy to OL Data Management
1 electronic copy to ISS Program Office repository (PALS or equivalent)

13. REMARKS:

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: Reporting of changes to MIDAS part catalog information 1b. Data Type: 3	2. Date of Current Version 1/23/03	3a. DRD No. B- MI-05	3b. RFP/Contract No. NNJ04AA02C
4. Use (Define need for, intended use of, and/or anticipated results of data) Provide change information to affected user of MIDAS parts catalog. Allows coordination of changes with other data systems for consistency and investigation into discrepancies between functional areas.			5. DRD Category <input checked="" type="checkbox"/> Technical <input type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References (SOW, Clause, etc.) SOW paragraph 4.1.1.3.6		7. Interrelationships (e.g., with other DRDs)	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

SCOPE: Changes to mass properties, part numbers, CAGE codes, and Engineering part names stored within the MIDAS parts catalog.

CONTENT: Report shall consist of:

- Name of person performing update
- Date of update
- Source of information that initiated the update
- Justification for making update, including identification of authorizing source
- Description of update in "from" "to" language
- Name of flights affected by the update. This should include those flights which have the part currently manifested.

FORMAT: Microsoft office compatible electronic format

9. OPR: OC

10. FIRST SUBMISSION DATE: With first update of Parts Catalog

Frequency Of Submission: Report sent per update of catalog. Groups of related changes made within a 24 hr period may be summarized within a single report.

Additional Submissions: Specific change reports shall be provided on demand to support investigations into specific part changes.

11. MAINTENANCE:

12. COPIES/DISTRIBUTION:

Electronic copy sent to appropriate program repository OPR (VMDB or equivalent)

13. REMARKS:

Reviewed By:

Chief, _____ Date _____
 Cost Accounting, Reports,
 and Property Branch
 Financial Management Division

Concurrence:

Chief Financial Officer _____ Date _____

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: NF53 M/Q Cost Reporting	2. Date of Current Version 4/4/03	3a. DRD No. B-PC-01	3b. RFP/Contract No NNJ04AA02C
1b. Data Type: 3			5. DRD Category <input type="checkbox"/> Technical <input checked="" type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
4. Use (Define need for, intended use of, and/or anticipated results of data) Provides summary level cost reporting.			7. Interrelationships (e.g., with other DRDs) All PC and PM DRDs
6. References (SOW, Clause, etc.) NPD 9501.1G, NPG 9501.2D and SOW 1.2.3			

8. PREPARATION INFORMATION: Overall instructions and guidance are in NPG9501.2D "NASA Contractor Financial Management Reporting."

9. SCOPE: The M/Q report shall provide a report for projecting costs and equivalent personnel (EPs), evaluating contractors' actual cost and fee, for the planning, monitoring, and controlling of project and program resources, and for accruing cost.

CONTENT: Supplementary instructions for content are in attachment 1. Content shall also include adding EP and calling out major subcontractors with a \$1M annual threshold to the cost elements in NPG 9501.2D. Content shall be mapped and reported at the ISS Program WBS level provided in attachment 2. All content of PC-01 shall reconcile to PC-02, PC-03, and PM-02.

FORMAT (attachment 3): In addition the following modifications shall be made to the monthly format. A column shall be added in front of section 6 to provide for "Prior Years Costs" (this column shall remain blank until the beginning of FY05). For section 8 add five columns to provide for six months of forecast; also under section 8, columns shall be added to provide for Balance of Current Year (forecast)," and a breakdown by fiscal year for the remainder of contract value.

The report shall be in three parts:

PC-01A shall be an executive summary narrative with variance explanations at each WBS level provided in attachment 2. Variance explanations shall be required when a +/- 5% variance occurs between the monthly forecasted cost and the actual cost for that month. The computation is (Forecasted Monthly Cost - Monthly Actual Cost / Monthly Forecasted Cost. The variance explanation shall identify the lowest level WBS contributing to the variance. In addition, variance explanations need to detail what caused the variance (i.e., IS change in direction, schedule) and the contractor's plan for resolving the affect of the variance. The forecast plan shall be adjusted to reflect any changes in baseline plan approved by NASA. The executive summary shall explain (listing and amount) any contract value changes and any changes between the types of contract.

PC-01B shall be a top level summary listing by contract cost elements (see attachment 1) including EPs for direct labor and EPs for major subcontractors (each on a separate line). Also to be added to the cost elements is direct cost for each major subcontractor, which have a \$1 million threshold.

PC-01C shall be report for each section as indicated in attachment 2. Each section will include cost and EPs for each WBS level as indicated in attachment 2. Each section will also include a summary of cost elements as identified in PC-01B. All costs will be rolled up and totaled per section.

10. OPR: LO

11. FIRST SUBMISSION DATE: NF533Q (initial baseline) shall be submitted 30 days after contract start.

Frequency Of Submission: Monthly
Additional Submissions:

11. MAINTENANCE: The contractor shall provide a revised NF533M immediately to correct errors when deemed necessary by the Financial Management Division. The revised NF533M shall be delivered prior to closure of the current JSC accounting system for the month. The reports shall be maintained electronically by contractor.

12. COPIES/DISTRIBUTION: Data Transmittal form (DTF) notification:

OL/Data Management	1 Copy
Original/record (hard copy) to the following:	
LW.	1 Copy
OL Data Mgmt	1 Copy
LO	2 Copies
OG/Assessment Office	1 Copy
Contracting Officer	1 Copy
Contracting Officer's Technical Representative (COTR)	1 Copy
DCMA	1 Copy
LF6/Financial Management Division	1 Copy
Additional Distribution per Contracting Officer's Letter	
Program authorized repository (PALS)	
Electronic copy: to a Program authorized repository (PALS or equivalent)	
LW	1 Copy
LO	1 Copy
OG	1 Copy
Contracting Officer	1 Copy
Contracting Officer's Technical Representative (COTR)	1 Copy

13. REMARKS:

B-PC-01 ATTACHMENT 1

The NASA Form 533 (NF533) reports provide data necessary for the following:

1. Projecting costs and hours to ensure that dollar and labor resources realistically support project and program schedules.
2. Evaluating contractors' actual cost and fee data in relation to negotiated contract value, estimated costs, and budget forecast data.
3. Planning, monitoring, and controlling project and program resources.
4. Accruing cost in NASA's accounting system, providing program and functional management information, resulting in liabilities reflected on the financial statements.

Cost is a financial measurement of resources used in accomplishing a specified purpose, such as performing a service, carrying out an activity, acquiring an asset, or completing a unit of work or project. NASA Contractor Financial Management Reporting, NASA Procedures and Guidelines (NPG) 9501.2D, or its most current revision, identifies the cost reporting requirements for a contract.

NASA is required by law to maintain accrual accounting, which requires cost to be reported in the period in which benefits are received, without regard to time of payment. Examples of accrual accounting for common cost elements reported on the NF533 follow:

Cost Element

Labor: Reported to NASA as hours are incurred.

Equipment & Materials (commercial off the shelf): Generally reported to NASA when received and accepted by the contractor.

Manufactured Equipment: Defined as any equipment that is produced to specific requirements that make it useless to anyone else without rework. Cost should be reported to NASA as the equipment is being manufactured. The straight-line method for estimating accrued costs or the use of supplemental information obtained from the vendor are acceptable methods used to calculate the cost accrual amount.

Leases: Reported to NASA using a proration over the life of the lease.

Travel: Reported to NASA as costs are incurred.

Subcontracts: Actual and estimated costs reported by prime contractors shall include subcontractors' incurred costs for the same accounting period. Where subcontract costs are material (significant), they should be separately identified on NF533 reports. The prime contractor shall include in the total cost of each subdivision of work the accrued cost (including fee, if any) of related subcontractor effort. Subcontractors should, therefore, be required to report cost to the prime contractor, using the accrual method of accounting. If the G&A and fee reported by a subcontractor are at the total subcontractor level, these costs must be allocated to specific sub-divisions of work. Data submitted by the subcontractor should be structured similar to the prime contractor's NF533 to enable the prime contractor to properly report to NASA. For Firm Fixed Price subcontracts with a contract value greater than \$500,000, the prime contractor is required to document the methodology used to generate the sub-contractor costs reported and provide this information to the Contracting Officer and Center Deputy Chief Financial Officer (Finance).

Unfilled Orders: Reported as the difference between the cumulative cost incurred to date and amounts obligated to suppliers and subcontractors.

Fee: Should be accrued as earned using a consistent and auditable method to determine the amount. For example: an acceptable method would be to use historical data to determine the amount to accrue each month. Fee should be reported on the NF533 following the "Total Cost" line. Award fee must be reported by the following categories: Base Fee, Fee Earned, Interim Fee, Provisional Fee, Potential Additional Fee, and Total Fee. If any of the above fee categories do not pertain, they should not be included in the NF533.

Prompt Payment Discounts: Cumulative cost reported to NASA should be the full incurred cost. The prompt payment discount amount taken should be reported as a separate line item on the NF533 below the cumulative cost amounts for the contract.

The NF533 reports are the official cost documents used at NASA for cost type, price redetermination, and fixed price incentive contracts. The data contained in the reports must be auditable using Generally Accepted Accounting Principles. Supplemental cost reports submitted in addition to the NF533 must be reconcilable to the NF533.

The due dates for the NF533M and NF533Q reports are outlined in Chapter 3 of NPG 9501.2D. The following is a summary of the NF533 due date requirements.

NF533 Report Due Date

NF533M: Due not later than 10 working days following the close of the contractor's monthly accounting period.

NF533Q: Due not later than the 15th day of the month preceding the quarter being reported.

The due dates reflect the date the NF533 reports are received by personnel on the distribution list, not the date the reports are generated or mailed by the contractor. It is critical that the NF533 reports are submitted in a timely manner to ensure adequate time for NASA to analyze and record the cost into the NASA accounting system.

Uncompensated overtime hours worked should be reported on NF533 reports as a separate line item or in the footnotes.

For contracts which have multiple schedules, a summary NF533 is required to provide a cumulative from inception cost for the contract, regardless of schedule.

An initial NF533 report is required in the NF533Q format to be used as a baseline for the life of the contract. The initial (baseline) NF533Q report shall be submitted by the contractor within 30 days after authorization to proceed has been granted. The initial report shall reflect the original contract value detailed by negotiated reporting categories and shall be the original contract baseline plan. In addition to the initial (baseline) report, monthly NF533 reporting shall begin no later than 30 days after the incurrence of cost.

Column 7b (planned cost incurred/hours worked for the month) and 7d (cumulative planned cost incurred/hours worked) of the NF533M represent the negotiated baseline plan for the contract. There may not be a relationship between the estimates provided in columns 8 of the NF533M to columns 7b and 7d. Columns 7b and 7d represent the legally binding contract negotiated baseline plan plus all authorized changes.

Short and long-term cost estimates, which include all data entered in columns 8 and 9a on the NF533M and NF533Q reports, shall be based on the most current and reliable information available.

Prior period cost adjustments should be reported in column 7a and 7c of NF533M and column 7a of the NF533Q with a footnote discussing the reasons for and amounts of the adjustments.

Monthly NF533 reporting is no longer required once the contract is physically complete, provided the final cost report includes actual cost only (no estimates or forecasts). The contractor must continue to submit monthly NF533 reports as long as estimates for the following period are included. If the final cost of a contract changes after the submission of the "final" contractor cost report, the contractor must submit a revised NF533 report in the month the cost change is recognized.

NASA <small>National Aeronautics and Space Administration</small>				Monthly Contractor Financial Management Report				Form Approved OMB No. 2700-0003		2. REPORT FOR MONTH ENDING AND NUMBER OF V	
TO:				FROM:				3. CONTRACT VALUE			
								a. COST		b.	
								\$		\$	
1. DESCRIPTION OF CONTRACT	a. TYPE			b. CONTRACT NO. & LATEST DEFINITIZED MODIFICATION NO.				4. FUND LIMITATION			
	c. SCOPE OF WORK			d. AUTH. CONTR. REP. (Signature)		DATE					
								5. BILLING			
								a. INVOICE AMTS. BILLED		b. TOTAL P*	
								\$		\$	
6. REPORTING CATEGORY	7. COST INCURRED/HOURS WORKED				8. ESTIMATED COST/HOURS TO COMPLETE			9. ESTIMATED FINAL			
	DURING MONTH		CUM TO DATE		DETAIL		BALANCE OF CONTRACT c.	COST/HOURS			
	ACTUAL a.	PLANNED b.	ACTUAL c.	PLANNED d.	a.	b.		CONTRACTOR ESTIMATE a.	CONTR VALL b.		
Baseline Plan Identification (Col. 7b & 7d):				Revision No. _____				Dated _____			

Quarterly Contractor Financial Management Report											Form Approved O.M.B. No. 2700-0003			2. REPORT BEGINNING			
To:						From:						3.1					
1. DESCRIPTION OF CONTRACT						a. TYPE						b. CONTRACT NO. AND LATEST DEFINITIZED MOD. NO.					
c. SCOPE OF WORK						d. AUTH. CONTR. REP. (Signature)						DATE					
6. REPORTING CATEGORY						7. COST INCURRED/HOURS WORKED						8. ESTIMATED COST/HOURS TO COMPLETE					
9. ESTIMATED FIN COST/HOURS						4. FUND LIMIT						5. INVOICE AMT. \$					
10. COST \$						11. BALANCE OF PY						12. NEXT PY.					
13. BALANCE OF CONTRACT						14. TOTAL TO COMPLETE						15. CONTRACTOR ESTIMATE					
16. COF V						17. MONTH						18. MONTH					
19. MONTH						20. QUARTER						21. QUARTER					
22. QUARTER						23. BALANCE OF PY						24. NEXT PY.					
25. BALANCE OF CONTRACT						26. TOTAL TO COMPLETE						27. CONTRACTOR ESTIMATE					
28. COF V						29. MONTH						30. MONTH					
31. MONTH						32. QUARTER						33. QUARTER					
34. QUARTER						35. BALANCE OF PY						36. NEXT PY.					
37. BALANCE OF CONTRACT						38. TOTAL TO COMPLETE						39. CONTRACTOR ESTIMATE					
40. COF V						41. MONTH						42. MONTH					
43. MONTH						44. QUARTER						45. QUARTER					
46. QUARTER						47. BALANCE OF PY						48. NEXT PY.					
49. BALANCE OF CONTRACT						50. TOTAL TO COMPLETE						51. CONTRACTOR ESTIMATE					
52. COF V						53. MONTH						54. MONTH					
55. MONTH						56. QUARTER						57. QUARTER					
58. QUARTER						59. BALANCE OF PY						60. NEXT PY.					
61. BALANCE OF CONTRACT						62. TOTAL TO COMPLETE						63. CONTRACTOR ESTIMATE					
64. COF V						65. MONTH						66. MONTH					
67. MONTH						68. QUARTER						69. QUARTER					
70. QUARTER						71. BALANCE OF PY						72. NEXT PY.					
73. BALANCE OF CONTRACT						74. TOTAL TO COMPLETE						75. CONTRACTOR ESTIMATE					
76. COF V						77. MONTH						78. MONTH					
79. MONTH						80. QUARTER						81. QUARTER					
82. QUARTER						83. BALANCE OF PY						84. NEXT PY.					
85. BALANCE OF CONTRACT						86. TOTAL TO COMPLETE						87. CONTRACTOR ESTIMATE					
88. COF V						89. MONTH						90. MONTH					
91. MONTH						92. QUARTER						93. QUARTER					
94. QUARTER						95. BALANCE OF PY						96. NEXT PY.					
97. BALANCE OF CONTRACT						98. TOTAL TO COMPLETE						99. CONTRACTOR ESTIMATE					
100. COF V						101. MONTH						102. MONTH					
103. MONTH						104. QUARTER						105. QUARTER					
106. QUARTER						107. BALANCE OF PY						108. NEXT PY.					
109. BALANCE OF CONTRACT						110. TOTAL TO COMPLETE						111. CONTRACTOR ESTIMATE					
112. COF V						113. MONTH						114. MONTH					
115. MONTH						116. QUARTER						117. QUARTER					
118. QUARTER						119. BALANCE OF PY						120. NEXT PY.					
121. BALANCE OF CONTRACT						122. TOTAL TO COMPLETE						123. CONTRACTOR ESTIMATE					
124. COF V						125. MONTH						126. MONTH					
127. MONTH						128. QUARTER						129. QUARTER					
130. QUARTER						131. BALANCE OF PY						132. NEXT PY.					
133. BALANCE OF CONTRACT						134. TOTAL TO COMPLETE						135. CONTRACTOR ESTIMATE					
136. COF V						137. MONTH						138. MONTH					
139. MONTH						140. QUARTER						141. QUARTER					
142. QUARTER						143. BALANCE OF PY						144. NEXT PY.					
145. BALANCE OF CONTRACT						146. TOTAL TO COMPLETE						147. CONTRACTOR ESTIMATE					
148. COF V						149. MONTH						150. MONTH					
151. MONTH						152. QUARTER						153. QUARTER					
154. QUARTER						155. BALANCE OF PY						156. NEXT PY.					
157. BALANCE OF CONTRACT						158. TOTAL TO COMPLETE						159. CONTRACTOR ESTIMATE					
160. COF V						161. MONTH						162. MONTH					
163. MONTH						164. QUARTER						165. QUARTER					
166. QUARTER						167. BALANCE OF PY						168. NEXT PY.					
169. BALANCE OF CONTRACT						170. TOTAL TO COMPLETE						171. CONTRACTOR ESTIMATE					
172. COF V						173. MONTH						174. MONTH					
175. MONTH						176. QUARTER						177. QUARTER					
178. QUARTER						179. BALANCE OF PY						180. NEXT PY.					
181. BALANCE OF CONTRACT						182. TOTAL TO COMPLETE						183. CONTRACTOR ESTIMATE					
184. COF V						185. MONTH						186. MONTH					
187. MONTH						188. QUARTER						189. QUARTER					
190. QUARTER						191. BALANCE OF PY						192. NEXT PY.					
193. BALANCE OF CONTRACT						194. TOTAL TO COMPLETE						195. CONTRACTOR ESTIMATE					
196. COF V						197. MONTH						198. MONTH					
199. MONTH						200. QUARTER						201. QUARTER					
202. QUARTER						203. BALANCE OF PY						204. NEXT PY.					
205. BALANCE OF CONTRACT						206. TOTAL TO COMPLETE						207. CONTRACTOR ESTIMATE					
208. COF V						209. MONTH						210. MONTH					
211. MONTH						212. QUARTER						213. QUARTER					
214. QUARTER						215. BALANCE OF PY						216. NEXT PY.					
217. BALANCE OF CONTRACT						218. TOTAL TO COMPLETE						219. CONTRACTOR ESTIMATE					
220. COF V						221. MONTH						222. MONTH					
223. MONTH						224. QUARTER						225. QUARTER					
226. QUARTER						227. BALANCE OF PY						228. NEXT PY.					
229. BALANCE OF CONTRACT						230. TOTAL TO COMPLETE						231. CONTRACTOR ESTIMATE					
232. COF V						233. MONTH						234. MONTH					
235. MONTH						236. QUARTER						237. QUARTER					
238. QUARTER						239. BALANCE OF PY						240. NEXT PY.					
241. BALANCE OF CONTRACT						242. TOTAL TO COMPLETE						243. CONTRACTOR ESTIMATE					
244. COF V						245. MONTH						246. MONTH					
247. MONTH						248. QUARTER						249. QUARTER					
250. QUARTER						251. BALANCE OF PY						252. NEXT PY.					
253. BALANCE OF CONTRACT						254. TOTAL TO COMPLETE						255. CONTRACTOR ESTIMATE					
256. COF V						257. MONTH						258. MONTH					
259. MONTH						260. QUARTER						261. QUARTER					
262. QUARTER						263. BALANCE OF PY						264. NEXT PY.					
265. BALANCE OF CONTRACT						266. TOTAL TO COMPLETE						267. CONTRACTOR ESTIMATE					
268. COF V						269. MONTH						270. MONTH					
271. MONTH						272. QUARTER						273. QUARTER					
274. QUARTER						275. BALANCE OF PY						276. NEXT PY.					
277. BALANCE OF CONTRACT						278. TOTAL TO COMPLETE						279. CONTRACTOR ESTIMATE					
280. COF V						281. MONTH						282. MONTH					
283. MONTH						284. QUARTER						285. QUARTER					
286. QUARTER						287. BALANCE OF PY						288. NEXT PY.					
289. BALANCE OF CONTRACT						290. TOTAL TO COMPLETE						291. CONTRACTOR ESTIMATE					
292. COF V						293. MONTH						294. MONTH					
295. MONTH						296. QUARTER						297. QUARTER					
298. QUARTER						299. BALANCE OF PY						300. NEXT PY.					
301. BALANCE OF CONTRACT						302. TOTAL TO COMPLETE						303. CONTRACTOR ESTIMATE					
304. COF V						305. MONTH						306. MONTH					
307. MONTH						308. QUARTER						309. QUARTER					
310. QUARTER						311. BALANCE OF PY						312. NEXT PY.					
313. BALANCE OF CONTRACT						314. TOTAL TO COMPLETE						315. CONTRACTOR ESTIMATE					
316. COF V						317. MONTH						318. MONTH					
319. MONTH						320. QUARTER						321. QUARTER					
322. QUARTER						323. BALANCE OF PY						324. NEXT PY.					
325. BALANCE OF CONTRACT						326. TOTAL TO COMPLETE						327. CONTRACTOR ESTIMATE					
328. COF V						329. MONTH						330. MONTH					
331. MONTH						332. QUARTER						333. QUARTER					
334. QUARTER						335. BALANCE OF PY						336. NEXT PY.					
337. BALANCE OF CONTRACT						338. TOTAL TO COMPLETE						339. CONTRACTOR ESTIMATE					
340. COF V						341. MONTH						342. MONTH					
343. MONTH						344. QUARTER						345. QUARTER					
346. QUARTER						347. BALANCE OF PY						348. NEXT PY.					
349. BALANCE OF CONTRACT						350. TOTAL TO COMPLETE						351. CONTRACTOR ESTIMATE					
352. COF V						353. MONTH						354. MONTH					
355. MONTH						356. QUARTER						357. QUARTER					
358. QUARTER						359. BALANCE OF PY						360. NEXT PY.					
361. BALANCE OF CONTRACT						362. TOTAL TO COMPLETE						363. CONTRACTOR ESTIMATE					
364. COF V						365. MONTH						366. MONTH					
367. MONTH						368. QUARTER						369. QUARTER					
370. QUARTER						371. BALANCE OF PY						372. NEXT PY.					
373. BALANCE OF CONTRACT						374. TOTAL TO COMPLETE						375. CONTRACTOR ESTIMATE					
376. COF V						377. MONTH						378. MONTH					
379. MONTH						380. QUARTER						381. QUARTER					
382. QUARTER						383. BALANCE OF PY						384. NEXT PY.					
385. BALANCE OF CONTRACT						386. TOTAL TO COMPLETE						387. CONTRACTOR ESTIMATE					
388. COF V						389. MONTH						390. MONTH					
391. MONTH						392. QUARTER						393. QUARTER					
394. QUARTER						395. BALANCE OF PY						396. NEXT PY.					
397. BALANCE OF CONTRACT						398. TOTAL TO COMPLETE						399. CONTRACTOR ESTIMATE					
400. COF V						399. MONTH						400. MONTH					

ATTACHMENT 2

REPORT	PWBS	SOW	TITLE	CF Section	LOE Section	IDIQ Section	Total
PC01C-TOTAL PC01C-SUBTOTAL	CF	TOTAL BY SOW BY CONTRACT TYPE					
		1.0	TOTAL MANAGEMENT & INTEGRATION	X			
		4.0	TOTAL OPERATIONS	X			
		6.0	TOTAL SAFETY AND MISSION ASSURANCE	X			
				IDIQ Section		Total	
	IDIQ	TOTAL BY SOW BY CONTRACT TYPE					
		1.0	TOTAL MANAGEMENT & INTEGRATION			X	
		4.0	TOTAL OPERATIONS				
		6.0	TOTAL SAFETY AND MISSION ASSURANCE				
				LOE Section		Total	
	LOE	TOTAL BY SOW BY CONTRACT TYPE					
		1.0	TOTAL MANAGEMENT & INTEGRATION		X		
		4.0	TOTAL OPERATIONS		X		
		6.0	TOTAL SAFETY AND MISSION ASSURANCE				
PC01CI		1.1	PROGRAM MANAGEMENT (Except 1.1.2)	X			
		1.1.2	INTERNAL/EXTERNAL PROGRAM REVIEW SUPPORT		X		
		1.2	BUSINESS MANAGEMENT	X			
		1.3	CONFIGURATION MANAGEMENT/DATA INTEGRATION	X			
		1.4	PROGRAM INFORMATION TECHNOLOGY	X			
				CF Section	LOE Section	IDIQ Section	Total
PC01CII	1.5.1.1	TRANSLATION					
		Per TO	Requested Translations			X	
		Per TO	Continuous Support			X	
				CF Section	LOE Section	IDIQ Section	Total
PC01CIII	1.5.1.2	INTERPRETATION					
		Per TO	Requested Interpretation			X	
		Per TO	Continuous Support			X	
				CF Section	LOE Section	IDIQ Section	Total
PC01CIV	1.5.1.3.1	JSC LANGUAGE EDUCATION CENTER		X			
		CREW LANGUAGE TRAINING				X	
				CF Section	LOE Section	IDIQ Section	Total
PC01V	1.5.1.4.1	TRANSPORTATION SERVICES				X	
		LOGISTICS (OTHER THAN TRANSPORTATION)			X		
				CF Section	LOE Section	IDIQ Section	Total
PC01VI	1.5.2	INTERNATIONAL MISSION INTEGRATION					
		1.5.2.1	INTERNATIONAL SHIPPING COORDINATION	X			
		1.5.2.3	ISS HAM RADIO PROJECT	X			
		1.5.2.4	JOINT CARGO CERTIFICATION TEAM		X		

ATTACHMENT 2 cont.

		CF Section	LOE Section	IDIQ Section	Total
PC01Cvii	4.1.1.1	INCREMENT/STAGE INTEGRATION (Except 4.1.1.1.5 & 4.1.1.1.9)			
	4.1.1.1.5	INCREMENT ENGINEER TASKS			
	4.1.1.1.9	STATION TACTICAL INCREMENT CONSUMABLES AND RESOURCE MGT			
		CF Section	LOE Section	IDIQ Section	Total
PC01Cviii	4.1.1.2	LAUNCH PACKAGE INTEGRATION (Except 4.1.1.2.8)			
	4.1.1.2.8	LAUNCH PACKAGE SUPPORT FUNCTIONS			
		CF Section	LOE Section	IDIQ Section	Total
PC01Cix	4.1.1.3	MANIFEST (Except 4.1.1.3.3)			
	4.1.1.3.3	TACTICAL/INCREMENT MANIFEST			
		CF Section	LOE Section	IDIQ Section	Total
PC01Cx	4.1.1.4	IMS			
	4.1.1.5	CREW PROVISIONING/MISSION HABITABILITY (Except 4.1.1.5.1)			
	4.1.1.5.1	CREW PROVISIONING			
	4.1.1.6	IMAGERY (Except 4.1.1.6.4)			
	4.1.1.6.4	SPECIAL REQUIREMENTS AND TECHNOLOGY ADVANCEMENT			
	4.1.1.7	PROGRAM OPERATIONS INTEGRATION (Except 4.1.1.7.5)			
	4.1.1.7.5	SPECIAL PROJECTS & STUDIES			
	4.1.1.9	ON-ORBIT STOWAGE CAPABILITIES & CONFIGURATION (Except 4.1.1.9.2)			
PC01Cxj	4.1.1.9.2	TACTICAL INTERNAL AND EXTERNAL VOLUME CONFIGURATION			
	6.1	S&MA MANAGEMENT			
	6.2	S&MA INTEGRATION			
	6.3	PROGRAM RISK			
	6.4	ISS SAFETY PROGRAM			
		CF Section	LOE Section	IDIQ Section	Total

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: Modified Cost Performance Report (CPR)	2. Date of Current Version <p style="text-align: center;">01/01/04</p>	3a. DRD No. <p style="text-align: center;">B-PC-02</p>	3b. RFP/Contract No. <p style="text-align: center;">NNJ04AA02C</p>
1b. Data Type: 3			4. Use (Define need for, intended use of, and/or anticipated results of data) <p style="text-align: center;">Provides five formats containing cost and related data for measuring contractor cost and schedule performance.</p>
5. DRD Category ___ Technical X Administrative ___ SR&QA			6. References (SOW, Clause, etc.) <p>NPD 9501.3, NPG 9501.3 and SOW 1.2.3.2</p>
7. Interrelationships (e.g., with other DRDs) <p>All PC and PM DRDs</p>			

8. PREPARATION INFORMATION: See attachments

SCOPE: PC-02 must be reconcilable with PC-01 and PM-02

CONTENT:

FORMAT:

9. OPR: OG

10. FIRST SUBMISSION DATE: Ten (10) Workdays after initial month end

Frequency Of Submission: Monthly

Additional Submissions:

11. MAINTENANCE:

12. COPIES/DISTRIBUTION: Data Transmittal form (DTF) notification:

OL/Data Management	1 Copy
Original/record (hard copy) to the following:	
LW	1 Copy
LO	2 Copies
OG/Assessment Office	1 Copy
Contracting Officer	1 Copy
Contracting Officer's Technical Representative (COTR)	1 Copy

Electronic copy: to a Program authorized repository (PALS or equivalent)	
LW	1 Copy
LO	1 Copy
OG	1 Copy
Contracting Officer	1 Copy
Contracting Officer's Technical Representative (COTR)	1 Copy

Electronic Data Interchange in American National Standards Institute (ANSI) X12 Standards (Transaction sets 839 for cost and 806 for schedule):

LO	1 Copy
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13. REMARKS: N/A

**DATA REQUIREMENTS DOCUMENT
PREPARATION INFORMATION**

TITLE: COST PERFORMANCE REPORT (CPR)

8.0 DESCRIPTION /PURPOSE (Attachment)

8.1 INTRODUCTION

8.1.1 This report consists of five formats containing cost and related data for measuring contractors' cost and schedule performance. Format 1 (Sample Format 1) provides data to measure cost and schedule performance by summary level Work Breakdown Structure (WBS) elements, the hardware, software and services the Government is buying. Format 2 (Sample Format 2) provides the same data by the contractor's organization. Format 3 (Sample Format 3) provides the budget baseline plan against which performance is measured. Format 4 (Sample Format 4) provides staffing forecasts for correlation with the budget plan and cost estimates. Format 5 (Sample Format 5) is a narrative report used to explain significant cost and schedule variances and other identified contract problems and topics.

8.1.2 CPR data will be used by NASA managers to: (a) integrate cost and schedule performance data with technical performance measures, (b) identify the magnitude and impact of actual and potential problem areas causing significant cost and schedule variances, and (c) provide valid, timely program status information to higher management.

8.1.3 The CPR is a management report. It should provide timely, reliable summary-level data with which to assess current and projected contract performance. The CPR's primary value to government program management is its ability to reasonably reflect current contract status. If the CPR contains excessively detailed or outdated information, management's ability to make informed, timely decisions may be impaired. It is important that the CPR be as accurate as possible so it can be used for its intended purpose. It should be used by the NASA management team, including Program Managers, engineers, cost estimators and financial management personnel, to confirm, quantify and track known or emerging contract problems and as a basis for communicating with the contractor. The contractor should ensure that CPR data accurately reflect how work is being performed and is consistent with the actual contract status.

8.2 APPLICATION /INTERRELATIONSHIP

8.2.1 This Data Requirements Document (DRD) contains the format and content preparation instructions for the data product generated by the specific and discrete task requirements as delineated in the contract.

8.2.2 This DRD will be used in conjunction with the standard NASA Form 533M/Q, and the Contract Work Breakdown Structure DRD.

8.2.3 The CPR will be provided consistent with Industry Guidelines for Earned Value Management Systems (ANSI/EIA Standard 748-98).

8.2.4 Unless otherwise provided in the contract, the CPR will be required on a monthly basis and submitted to the DRD distribution list no later than 10 workdays following the reporting cutoff date. Reports may reflect data either as of the end of the calendar month or as of the contractor's accounting period cutoff date.

8.2.5 Data reported in the CPR will pertain to all authorized contract work, including both priced and unpriced effort.

8.2.6 Certain aspects of the report are subject to negotiation between the Government and the contractor, such as:

8.2.6.1 The WBS levels to be reported on Format 1. The level of detail to be reported on Format 1 normally will be limited to level three of the Contract WBS or higher, but lower levels may be specified for high-cost or -risk items. The Government and the contractor should periodically review and adjust as necessary WBS reporting levels on Format 1 to ensure they continue to provide appropriate visibility without requiring excessive information. If there is a significant problem at a lower level, detailed reporting for that WBS element may be required until the problem is resolved.

8.2.6.2 All 5 formats are required.

8.2.6.3 The variance analysis thresholds, which, if exceeded, require problem analysis and narrative explanations. (Thresholds to be established by LO and contractor.)

8.2.6.4 The specific time increments to be used for the baseline and staffing projections required by Formats 3 and 4, will correspond (within the limits of the contractor's disclosed Fiscal Calendar) with the Government Fiscal Year.

8.2.6.5 The reporting provisions which apply to the Cost of Money line on Formats 1 and 2.

8.2.6.6 Organizational categories for Format 4, if different from Format 2. The Government may request that different organizational categories be used for reporting staffing in Format 4. If so, the Government and the contractor will negotiate the Format 4 categories. The Format 2 categories shall reflect the contractor's internal organization being used to perform the contract at hand.

8.2.6.7 In all cases, the CPR CDRL is subject to "tailoring." Tailoring is defined as deleting requirements from this DRD. All negotiated reporting provisions will be specified in the contract.

8.3 PREPARATION INSTRUCTIONS

8.3.1 Format. Contractor formats should be substituted whenever they contain all the required data elements at the specified reporting levels in a form suitable for NASA management.

8.3.2 Content. The Cost Performance Report shall contain the following:

8.3.2.1 Heading Information - Formats 1 - 5. Preparation instructions for Heading Information (Blocks 1 through 4) apply to Formats 1 through 5.

8.3.2.1.1 Contractor. Enter in Block 1.a the contractor's name and division, if applicable. Enter in Block 1.b the plant location and mailing address of the reporting contractor.

8.3.2.1.2 Contract. Enter the contract name in Block 2.a, the contract number in Block 2.b, the contract type in Block 2.c and the contract share ratio, if applicable, in Block 2.d.

8.3.2.1.3 Program. Enter in Block 3.a the program name, number, acronym and/or type, model, and series, or other designation of the item(s) purchased under the contract. Indicate the program phase, DDT&E or Production, in Block 3.b.

8.3.2.1.4 Report Period. Enter the beginning date in Block 4.a and the ending date in Block 4.b of the period covered by the report.

8.3.2.1.5 Security Classification. Enter the appropriate security classification at the top and bottom of each page.

8.3.2.1.6 Dollars in Factors. If reported dollar amounts have been factored down by a thousand, a million or a billion, enter the factor at the top of each page.

8.3.2.2 Format 1 - Work Breakdown Structure.

8.3.2.2.1 Contract Data.

8.3.2.2.1.1 Quantity. Enter in Block 5.a the number of items to be procured on this contract.

8.3.2.2.1.2 Negotiated Cost. Enter in Block 5.b the dollar value (excluding fee or profit) on which contractual agreement has been reached as of the cutoff date of the report. For an incentive contract, enter the definitized contract target cost. Amounts for changes will not be included in this item until they have been priced and incorporated in the contract through contract change order or supplemental agreement. For a cost plus fixed fee or award fee contract, enter the estimated cost negotiated. Changes to the estimated cost will consist only of amounts for changes in the contract scope of work, not for cost growth ("overrun") from the original estimated cost.

8.3.2.2.1.3 Estimated Cost of Authorized, Unpriced Work. Enter in Block 5.c the amount (excluding fee or profit) estimated for that work for which written authorization has been received, but for which definitized contract prices have not been incorporated in the contract through contract change order or supplemental agreement.

8.3.2.2.1.4 Target Profit/Fee. Enter in Block 5.d the fee or percentage of profit which will apply if the negotiated cost of the contract (see 8.3.2.2.1.2, above) is met.

8.3.2.2.1.5 Target Price. Enter in Block 5.e the target price (negotiated contract cost plus profit/fee) applicable to the definitized contract effort.

8.3.2.2.1.6 Estimated Price. Based on the most likely estimate of cost at completion for all authorized contract work and the appropriate profit/fee, incentive, and cost sharing provisions, enter in Block 5.f the estimated final contract price (total estimated cost to the Government). This number will be based on the most likely management estimate at completion in Block 6.c.1 and normally will change whenever the management estimate or the contract is revised.

8.3.2.2.1.7 Contract Ceiling. Enter in Block 5.g the contract ceiling price applicable to the definitized effort.

8.3.2.2.1.8 Estimated Contract Ceiling. Enter in Block 5.h the estimated ceiling price applicable to all authorized contract effort including both definitized and undefinitized effort.

8.3.2.2.2 Estimated Cost at Completion. These blocks will present the contractor's range of estimated costs at completion. The range of estimates is intended to allow contractor management flexibility to express possible cost outcomes. Contractors are encouraged to provide the most accurate EACs possible through program-level assessments of factors that may affect the cost, schedule or technical outcome of the contract. Where possible, such program-level assessments should include consideration of known or anticipated risk areas, and planned risk reductions or cost containment measures. EACs should be reported without regard to contract ceiling, if applicable. The methods used to develop worst case, best case and most likely management estimates at completion need not be described in the contractor's C/SCSC-compliant management control system description or CPR-No Criteria management procedures.

8.3.2.2.2.1 Management Estimate at Completion - Best Case. Enter in Block 6.a.1 the contractor's best case estimate at completion. The best case estimate is the one that results in the lowest cost to the Government. This estimate should be based on the outcome of the most favorable set of circumstances. If this estimate is different from the most likely estimate at completion (Block 6.c.1), the assumptions and conditions underlying this estimate should be explained briefly in Format 5. This estimate is for informational purposes only; it is not an official company estimate. There is no requirement for the contractor to prepare and maintain backup data beyond the explanation provided in Format 5.

8.3.2.2.2.2 Management Estimate at Completion - Worst Case. Enter in Block 6.b.1 the contractor's worst case estimate at completion. The worst case estimate is the one that results in the highest cost to the Government. This estimate should be based on the outcome of the least favorable set of circumstances. If this estimate is different from the most likely estimate at completion (Block 6.c.1), the assumptions and conditions underlying this estimate should be explained briefly in Format 5. This estimate is for informational purposes only; it is not an official company estimate. There is no requirement for the contractor to prepare and maintain backup data beyond the explanation provided in Format 5.

8.3.2.2.2.3 Management Estimate at Completion - Most Likely. Enter in Block 6.c.1 the contractor's most likely estimate at completion. This estimate is the contractor's official contract EAC and, as such, takes precedence over the estimates presented in Column (15) of Formats 1 and 2 and Blocks 6.a.1 and 6.b.1. This EAC is the value that the contractor's management believes is the most likely outcome based on a knowledgeable estimate of all authorized work, known risks and probable future conditions. This value need not agree with the total of Column (15) (Block 8.e). However, any difference should be explained in Format 5 in such terms as risk, use of management reserve, or higher management knowledge of current or future contract conditions. This EAC need not agree with EACs contained in the contractor's internal data, but must be reconcilable to them. The most likely EAC also will be reconcilable to the contractor's latest statement of funds required as reported in the Contract Funds Status Report, or its equivalent, if this report is a contractual requirement.

8.3.2.2.2.4 Contract Budget Base. Enter in Block 6.c.2 the total of negotiated cost (Block 5.b) and estimated cost of authorized, unpriced work (5.c).

8.3.2.2.2.5 Variance. Enter in Block 6.c.3 the Contract Budget Base (Block 6.c.2) minus the most likely estimate at complete (Block 6.c.1). This value will be explained in Format 5 according to applicable contractual requirements.

8.3.2.2.3 Authorized Contractor Representative. Enter in Block 7.a the name of the authorized person signing the report. Enter that person's title in Block 7.b. The authorized person will sign in Block 7.c. Enter the date signed in Block 7.d.

8.3.2.2.4 Performance Data.

8.3.2.2.4.1 Work Breakdown Structure Element. Enter in Column (1) of Block 8.a the noun description of the WBS items for which cost information is being reported. WBS items or levels reported will be those specified in the contract. (See 8.2.6.1 above.)

8.3.2.2.4.2 Cost of Money. Enter in Columns (2) through (16) of Block 8.b the Facilities Capital Cost of Money applicable to the contract.

8.3.2.2.4.3 General and Administrative (G&A). Enter in Columns (2) through (16) of Block 8.c the appropriate G&A costs. If G&A has been included in the total costs reported in Block 8.a above, G&A will be shown as a nonadd entry on this line with an appropriate notation. If a G&A classification is not used, no entry will be made other than an appropriate notation to that effect.

8.3.2.2.4.4 Undistributed Budget. Enter the amount of budget applicable to contract effort which has not yet been identified to WBS elements at or below the reporting level. For example, contract changes which were authorized late in the reporting period should have received a total budget; however, assignment of work and allocation of budgets to individual WBS elements may not have been accomplished as of the end of the period. Budgets which can be identified to WBS elements at or below the specified reporting level will be included in the total budgets shown for the WBS elements in Block 8.a and will not be shown as undistributed budget. Enter in Column (15) of Block 8.d the estimate at completion for the scope of work represented by the undistributed budget in Column (14) of Block 8.d. Enter in Column (16) of Block 8.d the variance, if any, and fully explain it in Format 5. All undistributed budget will be fully explained in Format 5.

8.3.2.2.4.4.1 Use of Undistributed Budget. The provisions made in this report for undistributed budget are primarily to accommodate temporary situations where time constraints prevent adequate budget planning or where contract effort can only be defined in very general terms. Undistributed budget should not be used as a substitute for adequate contract planning. Formal budgets should be allocated to contract effort and responsible organizations at the earliest possible time, preferably within the next reporting period.

8.3.2.2.4.5 Subtotal (Performance Measurement Baseline). Enter the sum of the direct, indirect, Cost of Money, and G&A costs and budgets in Columns (2) through (16) of Block 8.a through e. This subtotal is also referred to as the Performance Measurement Baseline because it represents the allocated budget baseline (less management reserve) against which performance is actually measured.

8.3.2.2.4.6 Management Reserve. Management reserve is an amount of the overall contract budget withheld for management control purposes rather than for the accomplishment of a specific task or set of tasks. It is not a contingency fund, and may not be eliminated from contract prices by the Government during subsequent negotiations nor used to absorb the cost of contract changes. In Column (14) of Block 8.f enter the total amount of budget identified as management reserve as of the end of the current reporting period. The amounts shown as management reserve in Formats 1, 2 and 3 will agree. Amounts of management reserve applied to WBS elements during the reporting period will be listed in Block 6.b of Format 3 and explained in Format 5.

8.3.2.2.4.6.1 Negative Management Reserve. Negative entries will not be made in Management Reserve (Column (14) of Block 8.f). There is no such thing as "negative management reserve." If the contract is budgeted in excess of the Contract Budget Base (the negotiated contract cost plus the estimated cost for authorized, unpriced work), the provisions applicable to formal reprogramming and the instructions in paragraphs 8.3.2.2.5.1, 8.3.2.2.6.6, 8.3.2.2.6.7 and 8.3.2.4.1.7 apply.

8.3.2.2.4.7 Total. Enter the sum of all direct, indirect, Cost of Money, G&A cost, undistributed budgets and management reserves, if applicable, in Columns (2) through (14) of Block 8.g. The Total lines of Format 1 (Block 8.g) and Format 2 (Block 5.g) will agree. The total of Column (14), Block 8.g, will equal the Total Allocated Budget shown in Block 5.f on Format 3.

8.3.2.2.5 Reconciliation to Contract Budget Base.

8.3.2.2.5.1 Formal Reprogramming. In exceptional cases, the procuring agency may authorize the contractor to establish performance measurement budgets that in total exceed the Contract Budget Base. This process is called formal reprogramming. The contractor and the Government will agree on how the results of a formal reprogramming will be reported in the Cost Performance Report before the formal reprogramming is initiated. This agreement and any other pertinent details on the reporting of the formal reprogramming will be included in Format 5. Blocks 9.a and 9.b provide the contractor the opportunity to reconcile the higher performance measurement budgets, also called an "Over Target Baseline," to the Contract Budget Base. (See 8.3.2.2.6.6, 8.3.2.2.6.7, 8.3.2.4.1.7, and 8.3.2.6.5 below for more information on reporting Over Target Baselines.)

8.3.2.2.5.2 Variance Adjustment. In reporting the results of a formal reprogramming (Over Target Baseline) the contractor may 1) apply the additional budget to completed work, thereby eliminating some or all of the existing cost or schedule variances, 2) apply the additional budget to remaining work, 3) apply some of the additional budget to completed work and some to remaining work, or 4) apply some of the additional budget to management reserve. If the contractor uses a portion of the additional budget to eliminate variances applicable to completed work, the total adjustments made to the cost and schedule variances will be shown in Columns (10) and (11) of Block 9.a. The total cost variance adjustment entered in Column (11) of Block 9.a will be the sum of the individual cost variance adjustments shown in Column (12) of Blocks 8.a through g.

8.3.2.2.5.3 Total Contract Variance. In Columns (10) and (11) of Block 9.b, enter the sum of the cost and schedule variances shown on the Total line (Block 8.g) and on the Variance Adjustment line (Block 9.a). In Column (14) enter the Contract Budget Base from Block 6.c.2. In Column (15) enter the management estimate at completion from Block 6.c.1. In Column (16) of Block 9.b enter the difference between Columns (14) and (15) of Block 9.b.

8.3.2.2.6 Columns (2) Through (16). When compliance with the C/SCSC is contractually required, the data in Columns (2) through (16) shall reflect the output of the contractor's C/SCSC-compliant integrated management system (refer to DFARS 252.234-7001). When compliance with the C/SCSC is not contractually required ("CPR - No Criteria"), the data in these columns shall be derived using the contractor's summary management procedures (refer to DFARS 252.242-7005).

8.3.2.2.6.1 Column (2) and Column (7) - Budgeted Cost - Work Scheduled. For the time period indicated, enter the Budgeted Cost for Work Scheduled (BCWS) in these columns.

8.3.2.2.6.2 Column (3) and Column (8) - Budgeted Cost - Work Performed. For the time period indicated, enter the Budgeted Cost for Work Performed (BCWP) in these columns.

8.3.2.2.6.3 Column (4) and Column (9) - Actual Cost - Work Performed (ACWP). For the time period indicated, enter the Actual Cost of Work Performed without regard to ceiling. In all cases, costs and budgets will be reported on a comparable basis.

8.3.2.2.6.4 Column (5) and Column (10) - Variance - Schedule. For the time period indicated, these columns reflect the differences between BCWS and BCWP. For the current period, Column (5) (schedule variance) is derived by subtracting Column (2) (BCWS) from Column (3) (BCWP). For the cumulative to date, Column (10) (schedule variance) is derived by subtracting Column (7) (BCWS) from Column (8) (BCWP). A positive figure indicates a favorable variance. A negative figure (indicated by parentheses) indicates an unfavorable variance. Significant variances as specified in the contract will be fully explained in Format 5. If the contract does not specify variance analysis thresholds, the contractor will provide appropriate variance analyses. (See 8.3.2.6.3.2.4 below.)

8.3.2.2.6.5 Column (6) and Column (11) - Variance - Cost. For the time period indicated, these columns reflect the difference between BCWP and ACWP. For the current period, Column (6) (cost variance) is derived by subtracting Column (4) (ACWP) from Column (3) (BCWP). For cumulative to date, Column (11) (cost variance) is derived by subtracting Column (9) (ACWP) from Column (8) (BCWP). A positive figure indicates a favorable variance. A negative figure (indicated by parentheses) indicates an unfavorable variance. Significant variances as specified in the contract will be fully explained in Format 5. If the contract does not specify variance analysis thresholds, the contractor will provide appropriate variance analyses. (See 8.3.2.6.3.2.4 below.)

8.3.2.2.6.6 Column (12) Reprogramming Adjustments - Cost Variance. Formal reprogramming (Over Target Baseline) results in budget allocations in excess of the Contract Budget Base and, in some instances, adjustments to previously reported variances. If previously reported variances are being adjusted, the adjustment applicable to each reporting line item affected will be entered in Column (12). The total of Column (12) will equal the amount shown on the Variance Adjustment line (Block 9.a) in Column (11).

8.3.2.2.6.7 Column (13) Reprogramming Adjustments - Budget. Enter the total amounts added to the budget for each reporting line item as the result of formal reprogramming (Over Target Baseline). The amounts shown will consist of the sum of the budgets used to adjust cost variances (Column (12)) plus the additional budget added to the WBS element for remaining work. Enter the amount of budget added to management reserve in the space provided on the management reserve line (Block 8.f). The total of Column (13) will equal the amount the Total Allocated Budget has been budgeted in excess of the Contract Budget Base as shown in Block 5.g of Format 3. An explanation of the reprogramming will be provided in Format 5.

8.3.2.2.6.7.1 Formal Reprogramming Reporting. Columns (12) and (13) are intended for use only in situations involving formal reprogramming (Over Target Baseline). Internal replanning actions within the Contract Budget Base do not require entries in these columns. Where contractors are submitting CPR data directly from automated systems, the addition of Columns (12) and (13) as shown may not be practical due to computer reprogramming problems or space limitations. In such cases, the information may be provided on a separate sheet and attached as Format 1a to each subsequent report. Contractors will not be required to abandon or modify existing automated reporting systems to include Columns (12) and (13) if significant costs will be associated with such change. Nor will contractors be required to prepare the report manually solely to include this information.

8.3.2.2.6.7.2. Formal Reprogramming Timeliness. Formal reprogramming (Over Target Baseline) can be a significant undertaking that may require more than a month to implement. To preclude a disruption of management visibility caused by a reporting hiatus, the contractor should implement the formal reprogramming expeditiously. If a reporting hiatus is needed, the contractor and the Government will agree on the date and duration of the hiatus before the formal reprogramming is initiated.

8.3.2.2.6.8 Column (14) - At Completion - Budgeted. Enter the budgeted cost at completion for the items listed in Column (1). This entry will consist of the sum of the original budgets plus or minus budget changes resulting from contract changes, internal replanning, and application of management reserves. The total (Block 8.g) will equal the Total Allocated Budget shown in Block 5.f on Format 3.

8.3.2.2.6.9 Column (15) - At Completion - Estimated. Enter the latest revised estimate of cost at completion including estimated overrun/underrun for all authorized work. If the subtotal (Block 8.e) does not agree with the most likely management estimate at completion (Block 6.c.1), the difference will be explained in Format 5. (See 8.3.2.2.2.3 above.)

8.3.2.2.6.10 Column (16) - At Completion - Variance. Enter the difference between the Budgeted - At Completion (Column (14)) and the Estimated - At Completion (Column (15)) by subtracting Column (15) from Column (14). A negative figure (indicated by parentheses) reflects an unfavorable variance. Significant variances as specified in the contract will be fully explained in Format 5. If the contract does not specify variance analysis thresholds, the contractor will provide appropriate variance analyses. (See 8.3.2.6.3.2.4 below.)

8.3.2.3 Format 2 - Organizational Categories.

8.3.2.3.1 Performance Data.

8.3.2.3.1.1 Column (1) - Organizational Category. In Block 5.a list the organizational categories which reflect the contractor's internal management structure. This format will be used to collect organizational cost information at the total contract level rather than for individual WBS elements. The level of detail to be reported will normally be limited to the organizational level immediately under the operating head of the facility. The contractor shall be given flexibility to report this information according to its own internal management structure. If the contractor is organized by product teams, this format may not be needed because it should resemble Format 1.

8.3.2.3.1.2 Cost of Money. Enter in Columns (2) through (16) of Block 5.b the Facilities Capital Cost of Money applicable to the contract.

8.3.2.3.1.3 General and Administrative. Enter in Columns (2) through (16) of Block 5.c the appropriate G&A costs. (See 8.3.2.2.4.3 above.)

8.3.2.3.1.4 Undistributed Budget. Enter in Column (14) of Block 5.d the budget applicable to contract effort, which cannot be planned in sufficient detail to be assigned to a responsible organizational area at the reporting level. The amount shown on this format may exceed the amount shown as undistributed budget on Format 1 if budget is identified to a task at or below the WBS reporting level but organizational identification has not been made; or may be less than the amount on Format 1 where budgets have been assigned to organizations but not to WBS elements. Enter in Column (15) of Block 5.d the estimate at completion for the scope of work represented by the

undistributed budget in Column (14) of Block 5.d. Enter in Column (16) of Block 5.d the variance, if any, and fully explain it in Format 5. (See 8.3.2.2.4.4 above.)

8.3.2.3.1.5 Subtotal (Performance Measurement Baseline). Enter the sum of the direct, indirect, Cost of Money, and G&A costs and budgets in Columns (2) through (16) of Block 5.a through e. (See 8.3.2.2.4.5 above.)

8.3.2.3.1.6 Management Reserve. In Column (14) of Block 5.f enter the amount of budget identified as management reserve. The Management Reserve entry will agree with the amounts shown in Format 1 and 3. (See 8.3.2.2.4.6 above.)

8.3.2.3.1.7 Total. Enter the sum of all direct, indirect, Cost of Money, and G&A costs and budgets, undistributed budgets and management reserves, if applicable, in Columns (2) through (14) of Block 5.g. The totals on this page will equal the Total line on Format 1. The total of Column (14) will equal the Total Allocated Budget shown in Block 5.f on Format 3.

8.3.2.3.2 Columns (2) Through (16). The instructions applicable to these columns are the same as the instructions for corresponding columns on Format 1. (See 8.3.2.2.6 and 8.3.2.2.6.1 through 8.3.2.2.6.10 above.)

8.3.2.4 Format 3 - Baseline.

8.3.2.4.1 Contract Data.

8.3.2.4.1.1 Original Negotiated Cost. Enter in Block 5.a the dollar value (excluding fee or profit) negotiated in the original contract. For a cost plus fixed fee or award fee contract, enter the estimated cost negotiated. For an incentive contract, enter the definitized contract target cost.

8.3.2.4.1.2 Negotiated Contract Changes. Enter in Block 5.b the cumulative cost (excluding fee or profit) applicable to definitized contract changes, which have occurred since the beginning of the contract.

8.3.2.4.1.3 Current Negotiated Cost. Enter in Block 5.c the sum of Blocks 5.a and 5.b. The amount shown should equal the current dollar value (excluding fee or profit) on which contractual agreement has been reached and should be the same as the amount in Negotiated Cost (Block 5.b) on Format 1.

8.3.2.4.1.4 Estimated Cost of Authorized, Unpriced Work. Enter in Block 5.d the estimated cost (excluding fee or profit) for contract changes for which written authorizations have been received, but for which contract prices have not been incorporated in the contract, as shown in Block 5.c of Format 1.

8.3.2.4.1.5 Contract Budget Base. Enter in Block 5.e the sum of Blocks 5.c and 5.d.

8.3.2.4.1.6 Total Allocated Budget. Enter in Block 5.f the sum of all budgets allocated to the performance of the contractual effort. The amount shown will include all management reserves and undistributed budgets. This amount will be the same as that shown on the Total line in Column (14) on Format 1 (Block 8.g) and Format 2 (Block 5.g).

8.3.2.4.1.7 Difference. Enter in Block 5.g the difference between Blocks 5.e and 5.f. In most cases, the amounts shown in Blocks 5.e and 5.f will be identical. If the amount shown in Blocks 5.f exceeds that shown in Block 5.e, it usually is an indication of a formal reprogramming (Over Target

Baseline). The difference should be explained in Format 5 at the time the negative value appears and subsequently for any change in the value.

8.3.2.4.1.8 Contract Start Date. Enter in Block 5.h the date the contractor was authorized to start work on the contract, regardless of the date of contract definitization. (Long lead procurement efforts authorized under prior contracts are not to be considered.)

8.3.2.4.1.9 Contract Definitization Date. Enter in Block 5.i the date the contract was definitized.

8.3.2.4.1.10 Planned Completion Date. Enter in Block 5.j the completion date to which the budgets allocated in the Performance Measurement Baseline have been planned. This date should represent the planned completion of all significant effort on the contract. The cost associated with the schedule from which this date is taken is the Total Allocated Budget (Block 5.f of Format 3).

8.3.2.4.1.10.1 Performance Measurement Schedule Inconsistent With Contractual Schedule. In exceptional cases, the contractor may determine that the existing contract schedule cannot be achieved and no longer represents a reasonable basis for management control. With Government approval, the contractor may rephrase its performance measurement schedule to new dates which exceed the contractual milestones, a condition known as "Over Target Schedule." These new dates are for performance measurement purposes only and do not represent an agreement to modify the contract terms and conditions. The Government and the contractor will agree on the new performance measurement schedule prior to reporting it in the Cost Performance Report. The contractor should provide pertinent information in Format 5 on any schedule milestones that are inconsistent with contractual milestones, beginning the month the schedule is implemented and each month thereafter.

8.3.2.4.1.10.2 Indicators of a Performance Measurement Schedule Inconsistent With the Contractual Schedule. Formal reprogramming or internal replanning may result in performance measurement milestones that are inconsistent with the contractual milestones (Over Target Schedule). A difference between the planned completion date (Block 5.j) and the contract completion date (Block 5.k) indicates that some or all of the performance measurement milestones are inconsistent with the contractual milestones. However, some performance measurement milestones may be inconsistent with contractual milestones even if these dates are the same.

8.3.2.4.1.11 Contract Completion Date. Enter in Block 5.k the contract scheduled completion date in accordance with the latest contract modification. The cost associated with the schedule from which this date is taken is the Contract Budget Base (Block 5.e of Format 3).

8.3.2.4.1.12 Estimated Completion Date. Enter the contractor's latest revised estimated completion date. This date should represent the estimated completion of all significant effort on the contract. The cost associated with the schedule from which this date is taken is the most likely management estimate at completion (Block 6.c.1 of Format 1).

8.3.2.4.2 Column (1) - Item.

8.3.2.4.2.1 Performance Measurement Baseline (Beginning of Period). Enter in Block 6.a the time-phased Performance Measurement Baseline (PMB) (including G&A) which existed at the beginning of the current reporting period. Most of the entries on this line are taken directly from the PMB (End of Period) line on the previous report. For example, the number in Column (4) on the PMB (End of Period) line from last month's report becomes the number in Column (3) on the PMB (Beginning of Period) line on this report. The number in Column (5) (end of period) last report becomes Column

(4) (beginning of period) on this report, etc. This rule pertains through Column (9) where the time increments change from monthly to some other periods of time. At this point, a portion of Column (10) (end of period) would go into Column (9) (beginning of period) and the remainder of Column (10) (end of period) would go into Column (10) (beginning of period). Columns (11) through (16) simply move directly up to the (beginning of period) line without changing columns. Total amounts should be segregated by major contract cost categories (e.g., development and spares).

8.3.2.4.2.2 Baseline Changes. List by number in Block 6.b, the contract changes and supplemental agreements authorized during the reporting period. All authorized baseline changes should be listed whether priced or unpriced. The amount of management reserve applied during the period should also be listed. Total amounts should be segregated by major contract cost categories (e.g., development and spares).

8.3.2.4.2.3 Performance Measurement Baseline (End of Period). Enter in Block 6.c the time-phased PMB as it exists at the end of the reporting period. The difference between this line and the PMB (Beginning of Period) should represent the effects of the authorized changes and allocations of management reserves made during the period. Significant differences should be explained in Format 5 in terms of reasons for necessary changes to time-phasing due to internal replanning or formal reprogramming, and reasons for the application of management reserve. Total amounts should be segregated by major contract cost categories (e.g., development and spares).

8.3.2.4.2.4 Management Reserve. Enter in Block 7 the total amount of management reserve remaining as of the end of the reporting period. This figure will agree with the amounts shown as management reserve in Formats 1 and 2.

8.3.2.4.2.5 Total. Enter in Column (16) of Block 8 the sum of Column (16) of Block 6.c (PMB (End of Period)) and Column (16) of Block 7 (Management Reserve). This amount should be the same as that shown on the Total line (Block 8.g) in Column (14) on Format 1.

8.3.2.4.3 Column (2) - BCWS - Cum To Date. On the PMB (Beginning of Period) line (Block 6.a), enter the cumulative BCWS as of the first day of the reporting period. This should be the same number reported as BCWS - Cum To Date on the Total line (Column (7) of Block 8.g) of Format 1 of the previous CPR. On the PMB (End of Period) line (Block 6.c), enter the cumulative BCWS as of the last day of the reporting period. This should be the same number reported as BCWS - Cum to Date on the Total line (Column (7) of Block 8.g) of Format 1 for this CPR.

8.3.2.4.4 Column (3) - BCWS For Report Period. On the PMB (Beginning of Period) line (Block 6.a), enter the BCWS planned for the reporting period. This should be the number in Column (4) on the PMB (End of Period) line (Block 6.c) on the preceding month's report.

8.3.2.4.5 Columns (4) Through (14). Enter the names of the next six months in the headings of Columns (4) through (9) of Block 6, and the names of the appropriate periods in the headings of Columns (10) through (14). In the PMB (Beginning of Period) line (Block 6.a), enter the BCWS projection reported in the previous CPR as PMB (End of Period) (Block 6.c). In the PMB (End of Period) line (Block 6.c) of this report, enter the projected BCWS (by month for six months and by periodic increments thereafter, or as negotiated with the procuring activity) for the remainder of the contract. The time-phasing of each item listed in Column (1) of Block 6.b need not be shown in Columns (4) through (14).

8.3.2.4.6 Column (15) - Undistributed Budget. On the PMB (Beginning of Period) line (Block 6.a), enter the number from Column (15) on the PMB (End of Period) line (Block 6.c) from the preceding

report. On the PMB (End of Period) line, enter the undistributed budget shown in Column (14) of Block 8.d on Format 1 of this report.

8.3.2.4.7 Column (16) - Total Budget. On the PMB (Beginning of Period) line (Block 6.a) enter the number from Column (16) on the PMB (End of Period) line (Block 6.c) from the preceding report. In the section where baseline changes that occurred during the period are listed (Column (1) of Block 6.b), enter the amount of each of the changes listed. On the PMB (End of Period) line (Block 6.c), enter the sum of the amounts in the preceding columns on this line. On the Management Reserve line (Block 7), enter the amount of management reserve available at the end of the period. On the Total line (Block 8) enter the sum of the amounts in this column on the PMB (End of Period) line and the Management Reserve line. (This should equal the amount in Block 5.f on this format and also the amount of the Total line in Column (14), Block 8.g, of Format 1.)

8.3.2.5 Format 4 - Staffing.

8.3.2.5.1 Performance Data. For those organizational categories shown in Column (1) of Block 5, equivalent months will be indicated for the current reporting period, cumulative through the current period, and forecast to completion. Direct equivalent months will be shown for each organizational category for the contract. An equivalent month is defined as the effort equal to that of one person for one month. Figures should be reported in whole numbers. (Partial months, .5 and above, will be rounded to 1; below .5 to 0.) When the Government and the contractor agree, staffing may be reported in equivalent days or hours.

8.3.2.5.1.1 Organizational Category. List the organizational categories that reflect the contractor's internal management structure in Block 5. Format 4 categories may differ from those reported in Format 2. If the Government needs different categories in Formats 2 and 4, the Format 4 categories will be addressed during negotiations. (See 7.6.7 above.)

8.3.2.5.1.2 Total Direct. In Block 6, Columns (2) through (15), enter the sum of all direct equivalent months for the organizational categories shown in Column (1).

8.3.2.5.2 Column (2) - Actual - Current Period. Enter the actual equivalent months incurred during the current reporting period.

8.3.2.5.3 Column (3) - Actual End of Current Period (Cum). Enter the actual equivalent months incurred to date (cumulative) as of the end of the report period.

8.3.2.5.4 Columns (4) Through (14) - Forecast (Non Cumulative). Enter a staffing forecast by month for a six-month period following the current period and by periodic increment thereafter, as negotiated with the procuring activity (see 7.6.4 above). The forecast will be updated at least quarterly unless a major revision to the plan or schedule has taken place, in which case forecasts will be changed for all periods involved in the report submitted at the end of the month in which the change occurred.

8.3.2.5.5 Column (15) - Forecast at Completion. Enter the estimate of equivalent months necessary for the total contract in Column (15) by organizational category. This estimate should be consistent with the most likely management estimate at completion shown in Block 6.c.1 of Format 1. Any significant change in the total number of equivalent months at completion of the contract (i.e., Column (15) Total) should be explained in Format 5.

8.3.2.6 Format 5 - Explanations and Problem Analyses.

8.3.2.6.1 General. Format 5, Explanations and Problem Analyses, is a narrative report prepared to supplement the other CPR formats. Format 5 will normally address 1) contractually required cost, schedule and estimate at completion variance analyses, 2) management reserve changes and usage, 3) undistributed budget contents, 4) differences between the best case, worst case, and most likely management estimate at completion, if any, 5) the difference between the most likely management estimate at completion and the estimate in Block 8.e of Column (15), if any, 6) significant differences between beginning of period PMB time phasing and end of period PMB time phasing in Format 3, 7) performance measurement milestones that are inconsistent with contractual milestones (Over Target Schedule), 8) formal reprogramming (Over Target Baseline) implementation details, and 9) significant staffing estimate changes in Format 4. However, any topic relevant to contract cost, schedule or technical performance can be addressed in this format.

8.3.2.6.2 Total Contract. Provide a summary analysis, identifying significant problems affecting performance. Indicate corrective actions required, including Government action where applicable. Significant changes since the previous report should be highlighted. Discuss any other issues affecting successful attainment of contract cost, schedule or technical objectives which the contractor deems significant or noteworthy. This section should be brief, normally one page.

8.3.2.6.3 Cost and Schedule Variances. Explain all variances which exceed specified variance thresholds. Explanations of variances must clearly identify the nature of the problem, significant reasons for cost or schedule variance, effect on the immediate task, impact on the total contract, and the corrective action taken or planned. Explanations of cost variances should identify amounts attributable to rate changes separately from amounts applicable to hours worked; amounts attributable to material price changes separately from amounts applicable to material usage; and amounts attributable to overhead rate changes separately from amounts applicable to overhead base changes or changes in the overhead allocation basis. To reduce the volume of variance analysis, the Government may allow the contractor to refer to a prior CPR's variance analysis explanations if the explanation for the current CPR's variance has not changed significantly.

8.3.2.6.3.1 Setting Variance Analysis Thresholds. The Government should require the minimum amount of variance analysis in Format 5 which satisfies its management information needs. Excessive variance analysis is burdensome and costly, and detracts from the CPR's usefulness, while too little information is equally undesirable. The contract should include a provision to review cost and schedule variance analysis thresholds periodically, normally semiannually, to determine if they continue to meet the Government's information needs. If they do not, the thresholds should be changed at no cost to the Government.

8.3.2.6.3.2 Identifying Significant Variances. There is no prescribed basis for identifying which cost and schedule variances are to be explained in Format 5. The Government may specify any one of several ways to identify such variances, including, but not limited to the following:

8.3.2.6.3.2.1 Fixed Number of Variances. Specify a number of significant variances. These variances can be either current month, cumulative, or at-completion. Any number of significant variances may be selected, but the Government should be careful to select only the number that it feels are necessary.

8.3.2.6.3.2.2 Percentage or Dollar Thresholds. Select variances based on percentage or dollar thresholds. Significant schedule variances are identified based on their size or percentage to Budgeted Cost for Work Scheduled, and significant cost variances are identified based on their size or percentage to Budgeted Cost for Work Performed. For example, all current month, cumulative or

at-completion variances greater than 10% or \$500K may be selected for analysis. This method usually results in a larger number of variances requiring reporting. Consequently, the thresholds should be reviewed periodically to ensure they continue to provide a reasonable amount of useful information.

8.3.2.6.3.2.3 Specific Variances. Select variances for analysis only after reviewing Formats 1 or 2. Under this method, the CPR is delivered promptly after the contractor's accounting period ends with all required information in Formats 1 through 5 except variance analyses. Once the Government has reviewed this performance data, it selects specific variances for analysis. This method may be the most efficient in that the Government can pinpoint areas to be analyzed. It is also the most flexible because there may be some months where a review of the performance data yields few or no variance analysis candidates. However, this method should only be used if the Government is certain it has sufficient resources to review the CPR early and select variances each month.

8.3.2.6.3.2.4 No Variance Analysis Thresholds Specified. If the contract does not specify variance analysis thresholds, the contractor will determine what significant variance explanations are reported. These explanations should focus on 1) areas where the Government should be informed of developing issues or problems, 2) areas of identified program risk or management interest, or 3) areas of significantly unfavorable cost or schedule performance.

8.3.2.6.4 Other Analyses. In addition to variance explanations, the following analyses are mandatory:

8.3.2.6.4.1. Management Estimate at Completion. If the best or worst case management estimates at completion differ from the most likely estimate, the contractor must provide a brief explanation of the difference. Also, if the most likely management estimate at completion differs from the total entered in Column 15 of Format 1 or 2, the contractor must explain the difference. The explanations should focus on such areas as differences in underlying assumptions; a knowledgeable, realistic risk assessment; projected use of management reserve; estimate for undistributed budget; and higher management knowledge of current or future contract conditions.

8.3.2.6.4.2 Undistributed Budget. Identify the effort to which the undistributed budget applies. Also, explain any variance between the undistributed budget and the estimate for undistributed budget in Formats 1 and 2.

8.3.2.6.4.3 Management Reserve Changes. Identify the sources and uses of management reserve changes during the reporting period. For management reserve uses, identify the WBS and organizational elements to which applied, and the reasons for application.

8.3.2.6.4.4 Baseline Changes. Explain reasons for significant shifts in time-phasing of the PMB shown on Format 3.

8.3.2.6.4.5 Staffing Level Changes. Explain significant changes in the total staffing estimate at completion shown on Format 4. Also, explain reasons for significant shifts in time-phasing of planned staffing.

8.3.2.6.5 Formal Reprogramming (Over Target Baseline). If the difference shown in Block 5.g on Format 3 becomes a negative value or changes in value, provide information on the following:

8.3.2.6.5.1 Authorization. Procuring activity authorization for the baseline change which resulted in negative value or change.

8.3.2.6.5.2 Reason. A discussion of the reason(s) for the change.

8.3.2.6.5.3 CPR Reporting. A discussion of how the change affected CPR reporting (i.e., amount allocated to management reserve, adjustments to cost or schedule variances, etc.).

8.3.2.6.5.4 Schedule. Indicate whether the contract schedule was retained for performance measurement or was replaced with a schedule that exceeds the contractual schedule (Over Target Schedule).

8.3.2.6.6 Over Target Schedule. If a performance measurement schedule exceeding the contractual schedule (Over Target Schedule) has been implemented, provide a discussion of the pertinent information, such as authorization, reasons and significant dates

CLASSIFICATION (When filled in)

COST PERFORMANCE REPORT

FORMAT 1 - WORK BREAKDOWN STRUCTURE

DOLLARS IN _____

Form Approved
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 3.1 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THIS ADDRESS. SUBMIT COMPLETED FORMS IN ACCORDANCE WITH CONTRACTUAL REQUIREMENTS.

1. CONTRACTOR	2. CONTRACT		3. PROGRAM	4. REPORT PERIOD
a. NAME	a. NAME		a. NAME	a. FROM (YYYYMMDD)
b. LOCATION (Address and ZIP Code)	b. NUMBER		b. PHASE (X one) <input type="checkbox"/> RDT&E <input type="checkbox"/> PRODUCTION	b. TO (YYYYMMDD)
	c. TYPE	d. SHARE RATIO		

5. CONTRACT DATA

a. QUANTITY	b. NEGOTIATED COST	c. EST. COST AUTHORIZED UNPRICED WORK	d. TARGET PROFIT/FEE	e. TARGET PRICE	f. ESTIMATED PRICE	g. CONTRACT CEILING	h. ESTIMATED CONTRACT CEILING
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6. ESTIMATED COST AT COMPLETION

	MANAGEMENT ESTIMATE AT COMPLETION (1)	CONTRACT BUDGET BASE (2)	VARIANCE (3)	a. NAME (Last, First, Middle Initial)	b. TITLE
a. BEST CASE				c. SIGNATURE	d. DATE SIGNED (YYYYMMDD)
b. WORST CASE					
c. MOST LIKELY					

7. AUTHORIZED CONTRACTOR REPRESENTATIVE

8. PERFORMANCE DATA

[illegible]

CLASSIFICATION (When filled in)

COST PERFORMANCE REPORT

FORMAT 2 - ORGANIZATIONAL CATEGORIES

DOLLARS IN

Form Approved
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average .6 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THIS ADDRESS. SUBMIT COMPLETED FORMS IN ACCORDANCE WITH CONTRACTUAL REQUIREMENTS.

1. CONTRACTOR	2. CONTRACT	3. PROGRAM	4. REPORT PERIOD
a. NAME	a. NAME	a. NAME	a. FROM (YYYYMMDD)
b. LOCATION (Address and ZIP Code)	b. NUMBER		
	c. TYPE	d. SHARE RATIO	b. TO (YYYYMMDD)
		b. PHASE (X one)	
		<input type="checkbox"/> RDT&E <input type="checkbox"/> PRODUCTION	

5. PERFORMANCE DATA

[illegible]

CLASSIFICATION (When filled in)

[illegible]

CLASSIFICATION (When filled in)

COST PERFORMANCE REPORT

FORMAT 4 - STAFFING

Form Approved

OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 5.0 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THIS ADDRESS. SUBMIT COMPLETED FORMS IN ACCORDANCE WITH CONTRACTUAL REQUIREMENTS.

1. CONTRACTOR	2. CONTRACT		3. PROGRAM	4. REPORT PERIOD
a. NAME	a. NAME		a. NAME	a. FROM (YYYYMMDD)
b. LOCATION (Address and ZIP Code)	b. NUMBER		b. PHASE (X one) <input type="checkbox"/> RDT&E <input type="checkbox"/> PRODUCTION	b. TO (YYYYMMDD)
	c. TYPE	d. SHARE RATIO		

5. PERFORMANCE DATA (All figures in whole numbers)

[illegible]

CLASSIFICATION (When filled in)

**COST PERFORMANCE REPORT
FORMAT 5 - EXPLANATIONS AND PROBLEM ANALYSES**

Form Approved
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 36.0 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THIS ADDRESS. SUBMIT COMPLETED FORMS IN ACCORDANCE WITH CONTRACTUAL REQUIREMENTS.

1. CONTRACTOR	2. CONTRACT	3. PROGRAM	4. REPORT PERIOD
a. NAME	a. NAME	a. NAME	a. FROM (YYYYMMDD)
b. LOCATION (Address and ZIP Code)	b. NUMBER		b. TO (YYYYMMDD)
	c. TYPE	d. SHARERATIO	
		b. PHASE (X one)	
		<input type="checkbox"/> RDT&E <input type="checkbox"/> PRODUCTION	

5. EVALUATION

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Workforce Reports	2. Date of Current Version 01/01/04	3a. DRD No. B-PC-03	3b. RFP/Contract No. NNJ04AA02C
1b. Data Type: 3			5. DRD Category __ Technical X Administrative __ SR&QA
4. Use (Define need for, intended use of, and/or anticipated results of data) To provide workforce information by geographic location.			
6. References (SOW, Clause, etc.) SOW 1.2.3.3		7. Interrelationships (e.g., with other DRDs) All PC and PM DRDs	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

SCOPE: The reports provide workforce data by geographic location. There are two types of reports: 1) a Monthly Workforce Report by location, and 2) an As Requested Workforce Report.

CONTENT: The monthly workforce report should provide Equivalent Personnel (EPs) by location, specifically on or off site (JSC), and by State for workforce outside of the Clear Lake area. The data should be reconcilable to other financial deliverables. The content of the As Requested Workforce Report will vary based on specific direction provided by NASA Headquarters to support congressional inquiries. Its most common form is an annual request to provide workforce by Zip Code.

FORMAT: Specific formatting to be tailored by LO/Contractor.

9. OPR: OG

10. FIRST SUBMISSION DATE: Ten (10) Workdays after initial month end

Frequency Of Submission: Monthly for the Monthly Workforce Report, and as directed for the As Requested Workforce Report.

Additional Submissions:

11. MAINTENANCE: Changes shall be incorporated by change page or complete reissue.

12. COPIES/DISTRIBUTION: Data Transmittal form (DTF) notification:

OL/Data Management	1 Copy
Original/record (hard copy) to the following:	
LW	1 Copy
LO	2 Copies
OG/Assessment Office	1 Copy
Contracting Officer	1 Copy
Contracting Officer's Technical Representative (COTR)	1 Copy
Electronic copy: to a Program authorized repository (PALS or equivalent)	
LW	1 Copy
LO	1 Copy
OG	1 Copy
Contracting Officer	1 Copy
Contracting Officer's Technical Representative (COTR)	1 Copy

13. REMARKS:

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Work Breakdown Structure (WBS) and Dictionary	2. Date of Current Version 01/01/04	3a. DRD No. B-PC-04	3b. RFP/Contract No. NNJ04AA02C
1b. Data Type: 1			
4. Use (Define need for, intended use of, and/or anticipated results of data) Provides framework to define work and to establish financial reporting levels and to correlate schedules.			5. DRD Category <input type="checkbox"/> Technical <input checked="" type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References (SOW, Clause, etc.) SOW 1.2.3.4		7. Interrelationships (e.g., with other DRDs) All PC and PM DRDs	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

SCOPE: Contains the contractual Work Breakdown Structure (WBS), the WBS Dictionary, and a map to the ISS Program WBS and SOW

CONTENT: Contains the contractual WBS, its dictionary, and Program map as follows:

- a. **WBS:** The WBS shall subdivide the total contracted effort into elements that serve as the basis for detailed planning and control of the project, and permit collection of cost and schedule data at element level. These elements include hardware, software, services, tasks, etc. It shall include all subcontracting and major procurement effort at the proper level. It shall be product oriented and structured so that key SOW tasks are at an appropriately high level.
- b. **WBS Dictionary:** The WBS Dictionary shall define the scope of each WBS element and narratively describe the tasks included in each element
- c. **Program WBS Map:** The contractor shall provide a mapping of the contract WBS to the ISS Program WBS and SOW.

FORMAT: Per JSC instructions and in a format supported by the program-authorized electronic library. The WBS shall be in a chart format showing element relationships. The WBS Dictionary shall be ordered in consonance with the WBS and shall reference each WBS element by its identifier and name. Specific formatting for the map to the Program WBS will be done by LO/contractor.

9. OPR: OG

10. FIRST SUBMISSION DATE: With initial proposal.

Frequency Of Submission: Update as required.

Additional Submissions: Final Thirty (30) operating days after contract start date.

11. MAINTENANCE: Document will be maintained electronically. Information shall be updated as required by the contractor.

12. COPIES/DISTRIBUTION: Data Transmittal form (DTF) notification:

OL/Data Management

1 Copy

Original/record (hard copy) to the following:

LW	1 Copy
LO	2 Copies
OG/Assessment Office	1 Copy
Contracting Officer	1 Copy
Contracting Officer's Technical Representative (COTR)	1 Copy

Electronic copy: to a Program authorized repository (PALS or equivalent)

LW	1 Copy
LO	1 Copy
OG	1 Copy
Contracting Officer	1 Copy
Contracting Officer's Technical Representative(COTR)	1 Copy

13. REMARKS: N/A

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Cost Performance Report (CPR) Earned Value Methodology Report	2. Date of Current Version 01/01/04	3a. DRD No. B-PC-05	3b. RFP/Contract No. NNJ04AA02C
1b. Data Type: 2			
4. Use (Define need for, intended use of, and/or anticipated results of data) Provides a framework to define and to establish reporting requirements for determination of earned value on Control Account Packages (CAPs).			5. DRD Category ___ Technical <input checked="" type="checkbox"/> Administrative ___ SR&QA
6. References (SOW, Clause, etc.) NPD 9501.3, NPG 9501 and SOW 1.2.3.2		7. Interrelationships (e.g., with other DRDs) All PC and PM DRDs	

8. PREPARATION INFORMATION: The contractor shall prepare a report in an electronic format similar to the structure of the sample report (See Attachment).

SCOPE: The contractor shall report on the methodology used to report the Budgeted Cost of Work Scheduled (BCWS), Actual Cost of Work Performed (ACWP), and the Budgeted Cost of Work Performed (BCWP) for all applicable contract reporting categories used to prepare the Cost Performance Report (CPR), as submitted per the requirements of DRD B-PC-02. Reporting is also required on subcontracts that, based on risk, schedule or dollar value criticality, may potentially impact successful fulfillment of this contract.

CONTENT: The minimum reporting criteria shall be consistent with the criteria used to prepare the CPR. The report shall be prepared on the Work Breakdown Structure (WBS) cost categories reported within the CPR and as submitted IAW DRD B-PC-02. Segregation of Cost Performance Only (CPO) / Level of Effort (LOE) managed work tasks from other discreetly measured work tasks is required and should be submitted in a format that would allow for a direct comparison of the CPR Format 1 (DRD B-PC-02) to this report. A sample report structure and format for preparing the report is provided (See attachment).

FORMAT: See attachment.

9. OPR: OG

10. FIRST SUBMISSION DATE: Thirty (30) operating days after contract start date.

Frequency Of Submission: Initial baseline submittal due after contract award.

Additional Submissions: Quarterly or as necessary to report significant changes to CPR methodology.

11. MAINTENANCE: the contractor shall maintain the report electronically.

12. COPIES/DISTRIBUTION: Data Transmittal form (DTF) notification:

OL/Data Management	1 Copy
Original/record (hard copy) to the following:	
LW	1 Copy
LO	2 Copies

OG/Assessment Office	1 Copy
Contracting Officer	1 Copy
Contracting Officer's Technical Representative (COTR)	1 Copy

Electronic copy: to a Program authorized repository (PALS or equivalent)

LW	1 Copy
LO	1 Copy
OG	1 Copy
Contracting Officer (CO)	1 Copy
Contracting Officer's Technical Representative (COTR)	1 Copy

13. REMARKS: N/A

COST PERFORMANCE REPORT (CPR)

DATE OF REPORT

EARNED VALUE METHODOLOGY

TO:		FROM:		ORGANIZATION:	
WBS / Organizational Element (1)	Type Of Effort (2)	Earned Value Methodology and Percent of WBS Measured (3)	Budgeted Cost of Work Scheduled (BCWS) (4)	Budgeted Cost of Work Performed (BCWP) (5)	Actual Cost of Work Performed (ACWP) (6)

NOTES: (All references to Type of Effort and Earned Value Methodology are based on the ANSI/EIA-748-A Standards, Earned Value Management Systems.)

(1) WBS / ORGANIZATION ELEMENT Enter the WBS/Organizational element being reported. There may be one or multiple entries per WBS, if appropriate, based on the number of methods used per WBS.

(2) TYPE OF EFFORT Enter D for Discrete Elements, A for Apportioned Elements and C for Cost Performance Only (CPR - or Level Of Effort) Elements.

(3) EARNED VALUE METHODOLOGY Based on the type of effort identified in (2) above, enter V for Valued Milestones, S for Standard Hours, M for Management Assessment and C for Cost

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Integrated Mission Integration Office Schedules	2. Date of Current Version 4/14/03	3a. DRD No. B-PC-06	3b. RFP/Contract No. NNJ04AA02C
1b. Data Type: 2 (initial submittal) 3 (updated)			
4. Use (Define need for, intended use of, and/or anticipated results of data) Provide team and office schedules for the mission integration functions			5. DRD Category <input type="checkbox"/> Technical <input checked="" type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References SOW paragraph 1.2.5; WBS paragraph 1.2.5; Integrated Scheduling Planning Process Document, Mission Integration Template Document, SSP 50489		7. Interrelationships (e.g., with other DRDs) B-PC-07, Program Level Schedules	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

SCOPE:

Mission integration technical tasks and deliverables shall be identified in team and office schedules. These schedules are used by the NASA Mission Integration Office (MIO) to manage flight, launch package, and team activities. The intent is for the Contractor to utilize established standard processes, data structures and reporting conventions to plan, manage, and report the assigned work for the Mission Integration Office Managers including Launch Package and Increment Managers. These schedules provide the basis for higher level Space Station Office schedules.

CONTENT:

- a. The contractor shall use the Mission Integration Template Document (SSP 50489) to generate template schedules as an initial point to derive flight, increment, and team/office schedules. These draft schedules will be modified with actual calendar dates that will be approved by NASA MIO Managers and teams. Scheduling TIMs will be held with scheduling, appropriate MIO managers and affected organizations to negotiate specific dates.
- b. The contractor shall provide selected resource loaded schedules which clearly depict the interrelationships and constraints among related tasks. The resource loaded schedules shall provide earned value tracking to the Tier III level. Tier III schedules shall be developed and maintained to provide critical path linkage to the Level I and Level II program milestones and will identify activities which are dependent upon other ISSP participants outside this contract. The contractor is encouraged to utilize modern manufacturing resource planning, industrial engineering techniques and other approaches to ensure schedule stability, accuracy, reliability, predictability, and achievability.
- c. The schedules shall be developed, maintained (updated), and provided to ensure a consistent, accurate, and stable scheduling approach that provides for the identification, coordination, sequencing, control, implementation and tracking of all MIO activities. The schedules shall be easily auditable by the Government.
- d. The approach shall provide the ability to fully identify, analyze, mitigate and control scheduling risks and impacts; accurately identify and analyze critical path activities; and allow its users to easily measure the progress towards achieving the intended plan.
- e. The approach shall not only represent the scheduled work for that activity, but also the requirements commitment from all interfacing organizations.
- f. Provide selected weekly and monthly updates and status reports.
- g. Scheduling approaches shall address the following information as a minimum
 - i. Scheduling symbology that is consistent with the ISPPD
 - ii. Predicted task duration/labor standards derived from accurate and objective prediction methodologies
 - iii. Indications of activities my appropriate nomenclature that clearly delineates the task to be performed
 - iv. Identification of who is responsible for doing the actual work
 - v. Required supporting activities or support from other contractors, outside organizations, agencies, or centers.

- vi. Identification of critical resource requirements.
- vii. Clear depiction of the interrelationships and constraints among related tasks
- viii. Identification of the critical path, priorities, high risk activities and other significant activities
- ix. Special test activities or requirements.

FORMAT: hardcopy and electronic

9. OPR: OC

10. FIRST SUBMISSION DATE: At contract start

Frequency Of Submission: Weekly unless otherwise stated in the SOW

Additional Submissions: N/A

11. MAINTENANCE: Changes shall be incorporated by change page or complete reissue. The contractor is encouraged to minimize documentation.

12. COPIES/DISTRIBUTION: Original/record (hard copy) to the following:

OL/Data Management

1 Copy

NASA MIO Managers and Teams

1 Copy

Electronic copy: to a Program authorized repository (Common Schedules Data or equivalent as required by NASA OPR)

13. REMARKS:

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Integrated Mission Integration Schedules	2. Date of Current Version 4/14/03	3a. DRD No. B-PC-07	3b. RFP/Contract No. NNJ04AA02C
1b. Data Type: 2 (initial submittal) 3 (updated)			
4. Use (Define need for, intended use of, and/or anticipated results of data) Provide and maintain a consistent and standardized schedule development and status for the International Space Station Program Office			5. DRD Category ___ Technical _x Administrative ___ SR&QA
6. References SOW paragraph: 1.2.5; WBS paragraph 1.2.5; Integrated Scheduling Planning Process Document		7. Interrelationships (e.g., with other DRDs) PC-02, Cost Performance Report (CPR)	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

SCOPE:

The schedule integrates the Mission Integration Organization. The intent is for the Contractor to utilize established standard processes, data structures and reporting conventions to plan, manage, and report the assigned work for the Mission Integration Office Manager, Launch Package Managers, Increment Managers, Cargo Integration Manager, Cargo Planning and Imagery Manager, International Partner Integration Manager and the Space Station Program Office.

CONTENT:

- a. The contractor shall provide resource loaded schedules which clearly depict the interrelationships and constraints among related tasks. The resource loaded schedules shall provide earned value tracking to the Tier III level. Tier III schedules shall be developed and maintained to provide critical path linkage to the Level I and Level II program milestones and will identify activities which are dependent upon other ISSP participants outside this contract. The contractor is encouraged to utilize modern manufacturing resource planning, industrial engineering techniques and other approaches to ensure schedule stability, accuracy, reliability, predictability, and achievability.
- b. The schedules shall be developed, maintained (updated), and provided to ensure a consistent, accurate, and stable scheduling approach that provides for the identification, coordination, sequencing, control, implementation and tracking of all utilization activities. The schedules shall be easily auditable by the Government.
- c. The approach shall provide the ability to fully identify, analyze, mitigate and control scheduling risks and impacts; accurately identify and analyze critical path activities; and allow its users to easily measure the progress towards achieving the intended plan.
- d. The approach shall not only represent the scheduled work for that activity, but also the requirements commitment from all interfacing organizations.
- e. Represent the Mission Integration Office on issues, status analyses and special agenda topics to the Integrated Program Schedule Panel weekly.
Provide bi-monthly status and updates to the Commons Schedules Database or equivalent.
- f. *Schedule consistency* as used in this DRD is defined as the degree to which the contractor utilized standardized scheduling approaches between similar processing activities and flows. *Accurate scheduling* as used in this DRD is defined as the accurate representation of work content and tasks duration (predicted vs. actuals). A *stable schedule* as used in this DRD refers to the degree to which daily schedule changes are minimized and limited to unforeseen hardware/software problems or NASA-directed changes.
- g. Scheduling approaches shall address the following information as a minimum
 - i. Scheduling symbology that is consistent with the ISPPD
 - ii. Predicted task duration/labor standards derived from accurate and objective prediction methodologies
 - iii. Indications of activities by appropriate nomenclature that clearly delineates the task to be performed
 - iv. Identification of who is responsible for doing the actual work
 - v. Required supporting activities or support from other contractors, outside organizations, agencies, or center.
 - vi. Identification of critical resource requirements.
 - vii. Clear depiction of the interrelationships and constraints among related tasks
 - viii. Identification of the critical path, priorities, high risk activities and other significant activities
 - ix. Special test activities or requirements.

- h. MIC schedules (Data type 3) shall cover as a minimum the following activities in addition to the above information:

Name	Required by	Frequency
Performance to Plan at L-12 months	Daily Space Station Review (DSSR)	3 days per week starting
Team Level schedules	Team Lead	weekly
ISS Integrated Assessment	Daily Space Station Review (DSSR)	weekly
Common schedules database updates	Integrated Program Schedule Panel	bi-weekly
Top Level schedules	ISS Monthly Program Review (IMPR)	monthly
Lower level schedules by exception	ISS Monthly Program Review (IMPR)	monthly

FORMAT: electronic

9. OPR: OM1/E. Smith

10. FIRST SUBMISSION DATE: On the first Monday of the month after contract start.

Frequency Of Submission: Monthly no more that 5 business days after as of last date of previous month

Additional Submissions: Informal updates in accordance with 8h above.

11. MAINTENANCE: Changes shall be incorporated by change page or complete reissue. The contractor is encouraged to minimize documentation.

12. COPIES/DISTRIBUTION:

1. **record (hard copy):** OL/ Data Management
2. **copy (electronic):** Report to ISS Program repository(Common Schedules Database or equivalent).

13. REMARKS: None

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Mission Integration Program Management Plan	2. Date of Current Version 01/01/04	3a. DRD No. B-PM-01	3b. RFP/Contract No. NNJ04AA02C
1b. Data Type: 1			
4. Use (Define need for, intended use of, and/or anticipated results of data) To describe the contractor's management organization, approach and systems.			5. DRD Category <input type="checkbox"/> Technical <input checked="" type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References (SOW, Clause, etc.) SOW 1.1.1 H.14.(g)		7. Interrelationships (e.g., with other DRDs) All PC and PM DRDs	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

SCOPE: The management plan shall describe the basis for the contractor management organization, approach and systems. It shall provide a comprehensive integration of all management systems of the prime, subcontractors, and major vendors. The system will include those specifically required to accomplish the Statement of Work, as well as those systems and procedures that are to be set in place by the contractor.

CONTENT: The Management Plan shall address the contractor's plan for work definition and authorization, scheduling, budgeting, data accumulation, Safety and Mission Assurance, Program recovery process, subcontract, material control, indirect cost management, baseline control, training and certification of personnel and organization structure.

The contractor's plan shall describe the areas of its internal systems where NASA access will be permitted, define access and interface requirements, and provide NASA the required training to be able to access and use these systems.

FORMAT: The contractor's format is acceptable.

9. OPR: COTR

10. FIRST SUBMISSION DATE: With initial proposal

Frequency Of Submission: Final version within 60 days of contract award.

Additional Submissions: Within 45 days after the addition/deletion of major content to the contract or to describe and justify major changes in the contractor's management organization, approach and/or systems.

11. MAINTENANCE: Changes shall be incorporated as required by change page or complete reissue.

12. COPIES/DISTRIBUTION:

Data Transmittal form (DTF) notification:

OL/Data Management

1 Copy

Original/record (hard copy) to the following:

LW

1 Copy

LO

2 Copies

OG/Assessment Office

1 Copy

Contracting Officer	1 Copy
Contracting Officer's Technical Representative (COTR)	1 Copy

Electronic copy: to a Program authorized repository (PALS or equivalent)

LW	1 Copy
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LO	1 Copy
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OG	1 Copy
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Contracting Officer	1 Copy
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Contracting Officer's Technical Representative (COTR)	1 Copy
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13. REMARKS:

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Integrated Management Review Products	2. Date of Current Version 01/01/04	3a. DRD No. B-PM-02	3b. RFP/Contract No. NNJ04AA02C
1b. Data Type: 3			
4. Use (Define need for, intended use of, and/or anticipated results of data) These packages support the monthly and quarterly management reviews of costs, schedule, and technical performance. The format provides a standardized approach for review materials.			5. DRD Category <input type="checkbox"/> Technical <input checked="" type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References (SOW, Clause, etc.) NPG 7120.5A, NPG 9501.2 and SOW 1.1.1		7. Interrelationships (e.g., with other DRDs) All PC and PM DRDs	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

SCOPE: These data packages document the integrated management reviews of the cost, schedule, and technical performance on the contract. There are two types of reviews: monthly and quarterly. PM-02 must be reconcilable with PC-01 and PC-02.

CONTENT: These packages support the monthly and quarterly management reviews of cost, schedule, and technical performance. Metrics that effectively indicate the level of success in the execution of contract requirements and the status of the contractor's achievement against the performance standards contained within this statement of work or elsewhere in this contract shall be presented at the program review. The metrics shall be developed and defined by the contractor with concurrence from the Government. These metrics shall provide linkage to Program level metrics in the Management Information System. The cost baseline is the Performance Measurement Baseline (PMB). The format provides a standardized approach for review materials.

The Monthly Integrated Review package:

Summary Section:

- Stoplight Status of fiscal year Program cost, schedule, and technical performance.
- Summary status of fiscal year reserves, risks and opportunities, and earned value performance.
- Fiscal year cost and workforce summaries
- Cumulative variance explanations (to fiscal year plan) and End-Of-Year trend variance explanations.
- Major Contract Milestone Schedule – 90 Day

Component Sections (done at major element/organization/subsystem level):

- Include all Summary Section items.
- Fiscal year resource loaded schedules with headcounts
- Statement of Work reconciliation
- Significant Achievements
- Details of Technical, cost and schedule risks
- Status of Interpreting, Translation, Language Training and Logistics, cost, schedule, and technical performance broken out by location (Russia vs US) when applicable.

The Quarterly Integrated Review Package:

Summary Section:

- Total Contract planning assumptions for budget horizon estimates (5 years), work content summary, workload drivers and key technical metrics.
- Cost and workforce estimates through the budget horizon (5 years)
- Major Program Milestone Schedule – 5 Year
- Summary Risks & Opportunities

- Performance of contract metrics
- Component Sections (done at major element/organization/subsystem level)
- Include all Summary Section items
- Resource loaded schedules by Work Breakdown Structure element for budget horizon (5 years).

FORMAT: Specific formatting to be tailored by LO/contractor

9. OPR: OC, OI, and OG

10. FIRST SUBMISSION DATE: The first Monthly input should support a review 20 working days after the initial financial month end. The first Quarterly input should support a review 20 working days after the end of the initial GFY quarter under contract.

Frequency Of Submission: Monthly and Quarterly

Additional Submissions:

11. MAINTENANCE: Changes shall be incorporated as required by change page or complete reissue.

12. COPIES/DISTRIBUTION:

Data Transmittal form (DTF) notification:

OL/Data Management	1 Copy
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Original/record (hard copy) to the following:

LW	1 Copy
LO	2 Copies
OG/Assessment Office	1 Copy
Contracting Officer	1 Copy
Contracting Officer's Technical Representative (COTR)	1 Copy
OC	1 Copy
OI	1 Copy

Electronic copy: to a Program authorized repository (PALS or equivalent)

LW	1 Copy
LO	1 Copy
OG	1 Copy
Contracting Officer	1 Copy
Contracting Officer's Technical Representative (COTR)	1 Copy
OC	1 Copy
OI	1 Copy

13. REMARKS:

NASA Data Management will send notification to the following:

LO
OG/Assessment Office
Contracting Officer
Contracting Officer's Technical Representative (COTR)

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Mission Integration Transition Plan	2. Date of Current Version January 2003	3a. DRD No. B-PM-03	3b. RFP/Contract No. NNJ04AA02C
1b. Data Type: 1			5. DRD Category ___ Technical __x Administrative ___ SR&QA
4. Use (Define need for, intended use of, and/or anticipated results of data) To define and control the contractor's approach to transition systems, functions and data responsibility from the incumbent contractor.			
6. References (SOW, Clause, etc.) 1.1.1.1		7. Interrelationships (e.g., with other DRDs)	

8. PREPARATION INFORMATION:

The contractor shall prepare the DRD as follows:

SCOPE: The transition plan shall describe the approach for the contractor transition of responsibility. It shall provide a comprehensive assessment of all systems, data and functions, of the prime, subcontractors and major vendors. The plan will include specific schedule milestones required to accomplish the transition and the responsible contractor element.

FORMAT: The contractors format is acceptable

9. OPR: COTR

10. FIRST SUBMISSION DATE: With initial proposal

Frequency Of Submission:

Additional Submissions: Within 45 days after the addition/deletion of major content to the contract or to describe and justify major changes in the contractor's management organization, approach and/or systems.

11. MAINTENANCE: Changes shall be incorporated as required by change page or complete reissue.

12.COPIES/DISTRIBUTION:

1 Original/record (hard copy): OL/Data Management

1 Electronic copy: to a Program authorized repository (PALS or equivalent)

13. REMARKS:

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Performance Assessment Plan & Performance Assessment Reports 1b. Data Type: Plan – 1 Reports - 3	2. Date of Current Version 01/30/03	3a. DRD No. B- PM-04	3b. RFP/Contract No. NNJ04AA02C
4. Use (Define need for, intended use of, and/or anticipated results of data) The Performance Assessment Plan provides the overall contract performance measurement approach. The initial submittal will be used in developing the Surveillance Plan. The Performance Assessment Reports are a key component of quarterly and semi-annual performance/award fee assessments.			5. DRD Category <input type="checkbox"/> Technical <input checked="" type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References (SOW, Clause, etc.) Section E.3, L.18		7. Interrelationships (e.g., with other DRDs) Award Fee Plan, Surveillance Plan	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

8a. SCOPE: The Performance Assessment Plan shall describe the contractor's overall approach to contract performance assessment, quality, performance metrics and the implementation process for accomplishing metric evaluation and reporting. The Performance Assessment Reports shall provide a self-assessment for the reporting period.

8b. CONTENT: The Performance Assessment Plan shall consist of the following:

- Description of the contractor's approach and rationale for assessing performance
- Description of the methods the contractor plans to use to assess performance, quality, systems used, reporting mechanisms, and how the data will be used to improve future performance and adjust to changing requirements.
- Description of management systems and processes used to implement the plan including the developing, timely gathering, compiling, maintaining, auditing, analyzing, reporting, and providing management review of performance metrics.
- Description of the performance metrics including references to SOW paragraphs
- Description of the Award fee metrics used to address the Award Fee Metric subject areas included in the government's Attachment J-4 Award Fee Evaluation Plan, including the rationale for the development process and linkage between the metric categories. These metrics shall be divided into three linked categories:
- Category I comprised of the most important outcome-based metrics
- Category II composed of important leading indicator metrics
- Category III comprised of trend metrics

Award Fee Category I, II, and III metrics shall consist of at least the following for each metric:

- Definition and description of the metric
- Graphical representation
- Algorithm (if calculated)
- Assessment criteria for expected (standard) performance

The Performance Assessment Reports for Award Fee Category I, II, and III metrics shall consist of the following:

- Contractor's summary assessment ("metric score card") for all award fee metrics
- Metrics as described in the plan updated to reflect actual performance and quality during the period
- Narrative performance assessment by month for each metric

- Historical performance data
- Index of any changes to metrics since the last period
- Recommended action (i.e. performance improvement initiatives, lessons learned)

8c. FORMAT: Contractor format is acceptable

9. OPR: OC

10. FIRST SUBMISSION DATE:

First Submission Date: The Performance Assessment Plan requires approval of the Program Manager, International Space Station Program. An initial draft as described in Section L of the Mission Integration RFP shall be submitted with the proposal. The complete draft plan shall be submitted within 30 days after contract start and revised to provide a final plan for approval within 90 days after contract start. The plan shall be reviewed at least annually thereafter and updated as required. If there are no changes since the last update, the Contractor shall re-certify its accuracy NLT 1 October of each year.

Performance Assessment Reports – Formal Performance Assessment Reports for Category I, II and III Award Fee Metrics shall be submitted every six months, with interim reports provided at the midpoint of each 6-month award fee period. Report is due within 15 calendar days of the end of the quarter in the established period.

11. MAINTENANCE:

The plan, including metrics, shall be reviewed annually and updated as required. Changes shall be incorporated as required by change page or complete reissue. Metrics shall be evaluated, updated and reported on a monthly basis on the web. Performance/Award Fee category metrics shall be reported in formal quarterly and semiannual evaluation reports.

12. COPIES/DISTRIBUTION: Per Contracting Officer's Letter

Original/record (hard copy): OL/Data Management

Electronic copy: to a Program authorized repository (PALS or equivalent)

13. REMARKS:

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: Organization Chart	2. Date of Current Version 2/4/03	3a. DRD No. B-PM-05	3b. RFP/Contract No. NNJ04AA02C
1b. Data Type: 3			
4. Use (Define need for, intended use of, and/or anticipated results of data) For use by NASA technical personnel to identify manpower reporting structures, assist in evaluating manpower status, and identify manpower by personnel.			5. DRD Category ___ Technical _X_ Administrative ___ SR&QA
6. References (SOW, Clause, etc.) SOW 1.1.1.1		7. Interrelationships (e.g., with other DRDs) B-PM-01, Program Management Plan	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

SCOPE: The contractor shall provide organizational information to provide NASA insight into staffing and organizational structure for all personnel.

CONTENT: The contractor shall submit a detailed organization chart which identifies the contractor's management reporting structure. Titles and names of individuals will be included, and if supervisory, so designated. Contractor shall provide prime and subcontract personnel providing services. Authorized but unfilled positions will also be noted within the organization chart. Location shall be shown by the name of all contractor personnel.

FORMAT: Contractor Format is acceptable

9. OPR: CO

10. FIRST SUBMISSION DATE: Contract start

Frequency Of Submission: Updates monthly

Additional Submissions: In the event of significant change in key personnel or in the reporting structure an update shall be submitted within 5 working days of such change.

11. MAINTENANCE: As required

12. COPIES/DISTRIBUTION:

1 original/record (hardcopy): OL/Data Management

1 copy (electronic): Program authorized repository (PALS or equivalent)

13. REMARKS: OL/Data Management will distribute copies to CO and COTR

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Certification of Flight Readiness (CoFR) Implementation Plan	2. Date of Current Version 01/01/04	3a. DRD No. B-PM-06	3b. RFP/Contract No. NNJ04AA02C
1b. Data Type: 1			
4. Use (Define need for, intended use of, and/or anticipated results of data) To provide a management approach and implementation plan for Certificate of Flight Readiness (CoFR) endorsement			5. DRD Category Technical SR&QA
6. References (SOW, Clause, etc.) SSP 50108		7. Interrelationships (e.g., with other DRDs)	

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8. **PREPARATION INFORMATION:** The contractor shall prepare the data delivery as follows:

8a. **SCOPE:** The plan shall describe the management approach and planned implementation methods for accomplishing the contractor's CoFR responsibilities and requirements of the contract.

8b. **CONTENT:** Address all contractor responsibilities for preparing for the CoFR endorsement in accordance with SSP 50108. The Plan must address relationship to NASA counterparts and the division of responsibility for the CoFR endorsement activities.

8c. **FORMAT:** Contractor format is acceptable

9. **OPR:** OC for ISSP

10. **FIRST SUBMISSION DATE:**

First Submission Date: Submit draft within 30 days after contract award.

Revision: Provide final version for approval within 60 days after contract start.

Review: Provide annual review and update as required. If there are no changes since the last update, the Contractor shall re-certify it's accuracy NLT 1 October of each fiscal year.

11. **MAINTENANCE:** Changes to the plan shall be incorporated as required by change page or complete reissue. Changes to Flight Readiness Status and Endorsements shall be made as required. The contractor shall maintain a historical file of Flight Readiness Status.

12. **COPIES/DISTRIBUTION:**

1 original/record (hard copy): OL/Data Management

1 electronic copy: to a Program authorized repository (PALS or successor equivalent system)

Additional distribution per Contracting Officer's letter

13. **REMARKS:**

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: Contract Close-out Plan	2. Date of Current Version 01/01/04	3a. DRD No. B-PR-01	3b. RFP/Contract No. NNJ04AA02C
1b. Data Type: 1			5. DRD Category — Technical <input checked="" type="checkbox"/> Administrative — SR&QA
4. Use (Define need for, intended use of, and/or anticipated results of data) Manage and control Close-out.			
6. References (SOW, Clause, etc.)		7. Interrelationships (e.g., with other DRDs)	

8. PREPARATION INFORMATION: The contractor shall prepare the deliverable as follows:

SCOPE: This plan shall provide the details necessary to transition the contract to any follow-on contract and to close out the existing contract.

CONTENT: The content of the deliverables shall include:

- (a) Implementation Strategy
- (b) Task description and schedule
- (c) Staffing profile
- (d) Cost Estimate
- (e) Data products required for transition

FORMAT: Contractor's format is acceptable.

9. OPR: BG

10. FIRST SUBMISSION DATE: draft 1 year prior to end of contract

Frequency Of Submission: Twice

Additional Submissions: Final 180 days prior to end of contract

11. MAINTENANCE: This DRD shall be maintained electronically by the contractor.

12. COPIES/DISTRIBUTION:

1 Original/record (hard copy): OL/Data Management

1 Electronic copy: to a Program authorized repository (PALS or equivalent)

13. REMARKS:

NASA Data Management will send notification to the following:
Contracting Officer
COTR

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Wage/Salary and Fringe Benefit Data	2. Date of Current Version 01/01/04	3a. DRD No. B-PR-02	3b. RFP/Contract No. NNJ04AA02C
1b. Data Type: 3 4. Use (Define need for, intended use of, and/or anticipated results of data) The Wage/Salary and Fringe Benefit Data will be used by the NASA Contracting Officer and the Contract Labor Relations Office to provide the necessary data for submittal of Standard Form (SF) 98, Notice of Intention to Make a Service Contract and Response to Notice, to the Department of Labor, and to assist in the monitoring of Service Contract Act compliance.			5. DRD Category <input type="checkbox"/> Technical <input checked="" type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References (SOW, Clause, etc.) FAR 52.222-41, Service Contract Act of 1965, as amended		7. Interrelationships (e.g., with other DRDs)	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

SCOPE: The Wage/Salary and Fringe Benefit Data must be submitted by the Contractor, and any subcontractors which are subject to the provisions of the Service Contract Act, to the Contracting Federal Agency. In accordance with FAR regulations 22.1007 and 22.1008, the Contracting Officer is required to submit a SF 98 to the Department of Labor, Wage and Hour Division.

APPLICABLE DOCUMENTS: None

CONTENTS: The Wage/Salary and Fringe Benefit Data should contain the data included in the enclosed DRD forms, titled "Wage/Salary Rate Information", "Fringe Benefit for Service Employees", and "Fringe Benefits per Collective Bargaining Agreement". The Wage/Salary Rate Information shall contain a listing of all exempt and nonexempt labor classifications working on the contract. Separate forms should be utilized for classifications working in different geographic areas and for each subcontractor. Wage determination numbers, appropriation labor organization names, and subcontractor names, must be reflected. All nonexempt labor classifications must be matched to wage determination classes or to CBA classifications for represented classes. Annotate exempt or nonexempt and union or nonunion. The current hourly rates should reflect the actual lowest and highest paid employees, along with a computed average rate. State the number of employees working in each category. Separate Fringe Benefit forms should be completed for non represented classifications and for each separate CBA. A separate form must be completed for the prime and each subcontractor. Three copies of each Collective Bargaining Agreement are required.

FORMAT: The Wage/Salary and Fringe Benefit Data should be in a format substantially the same as enclosed with this DRD. (Forms 2, 3, and 3A)

9. OPR: Contracting Officer

10. FIRST SUBMISSION DATE:

Frequency Of Submission: Start date of contract, at end of phase-in.

Additional Submission: Annually, 90 days prior to the anniversary date of the contract.

11. MAINTENANCE: Changes shall be incorporated as required by change page or complete reissue.

12. COPIES/DISTRIBUTION:

1 Original/record (hard copy): OL/Data Management

1 Electronic copy: to a Program authorized repository (PALS or equivalent)

13. REMARKS:

NASA Data Management will send notification to the following:
Contracting Officer
BA2/Contract Labor Relations Office

Illustration of required data:

Project Manager	Not Required	E	N	\$35.00	1
Supervisor	Not Required	E	N	\$28.00	1
Electrical Engineer	Not Required	E	N	\$22.50 - \$28.00	3
Technician, Jr	Elect Tech Main I	N	U	\$13.36 - \$15.50	12
Technician, Sr	Elect Tech Main II	N	U	\$19.02 - \$21.50	4
Secretary	Secretary I	N	N	\$13.56 - \$15.50	2
File Clerk	General Clerk II	N	N	\$9.27	1
Clerical Data Entry	Word Processor I	N	N	\$10.41 - \$12.90	3

Submit data in the above illustrated format for all labor classifications used, or planned to be used, on this contract.

All contractor labor classifications must be matched to wage determination classes listed in CBA's represented classes or classes shown in WD 94-2516 for nonrepresented classes.

<u>CONTRACTORS LABOR</u> <u>CLASSIFICATION</u>	<u>WAGE</u> <u>DETERMINATION</u> <u>CLASSIFICATION</u>	<u>EXEMPT OF</u> <u>NONEXEMPT</u>	<u>UNION OR</u> <u>NONUNION</u>	<u>CURRENT HOURLY</u> <u>RATE</u>	<u>MYE NO OF</u> <u>EMPLOYEES</u>
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FRINGE BENEFITS PER COLLECTIVE BARGAINING AGREEMENT

For period from _____ to _____

Contractor:

Contract Number:

Number of employees in bargaining unit _____

Total number of employees on contract _____

1. Shift Differential: (Describe any pay over and above base rates for 2nd, 3rd, weekend, or other shifts.)

2. Health and Welfare Items and Other Fringe Items: (Indicate whether or not coverage is provided to employees and state current average hourly cost per employee covered by a Collective Bargaining Agreement.)

Item	Coverage Provided (Yes or No)	Average Hourly Cost
a. Life Insurance		
b. Accidental Death		
c. Disability		
d. Medical and Hospital		
e. Dental		
f. Retirement Plan		
g. Savings/Thrift Plan		
h. Sick Leave		
i. Tuition		
j. Other (Describe)		

3. Paid Absences:

Service Requirement

Days per Year

- a. Vacation
- b. Holiday
- c. Sick Leave
- d. Jury Leave
- e. Funeral Leave
- f. Military Leave
- g. Other (Describe)

4. Severance Pay: (Briefly describe terms and amounts.)

5. Other Fringe Benefits: (Describe any other fringe benefits not included above, and show average hourly cost.)

6. Premium Pay: (Discuss all premium pay provisions not previously shown on this form.)

Signature of Company Representative

Date

FRINGE BENEFITS FOR SERVICE EMPLOYEES

For Period from _____ to _____

Contractor:

Number of nonexempt employees on contract: _____

Total number of employees on contract: _____

1. Health and Welfare Items and Other Fringe Items:
(Indicate whether or not coverage is provided to employees and state current average hourly cost per service employee.)

<u>Item</u>	<u>Coverage Provided</u>	<u>Average Hourly Cost</u>
a. Life Insurance		
b. Accidental Death		
c. Disability		
d. Medical & Hospital		
e. Dental		
f. Retirement Plan		
g. Savings/Thrift Plan		
h. Sick Leave		
i. Tuition Reimbursement		
j. Other (Describe)		

2. Paid Absences

	<u>Service Requirement</u>	<u>Days per Year</u>
a. Vacation		
b. Holidays		
c. Sick Leave		
d. Jury Leave		
e. Funeral Leave		
f. Military Leave		
g. Other (Describe)		

Signature of Company Representative

Date

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: Reprocurement Data Package 1b. Data Type: 2	2. Date of Current Version 01/01/04	3a. DRD No. B-PR-03	3b. RFP/Contract No. NNJ04AA02C
4. Use (Define need for, intended use of, and/or anticipated results of data) Provide content and format requirements for delivery to NASA of all analytical models, tools, supporting documentation, equipment, data items and resource/cost information used to perform future reprocurement activities. Note: This data may be disclosed to competing offerors in the future			5. DRD Category <input checked="" type="checkbox"/> Technical <input type="checkbox"/> Administrative <input type="checkbox"/> SR&QA
6. References (SOW, Clause, etc.) Section H		7. Interrelationships (e.g., with other DRDs)	

8. PREPARATION INFORMATION: The contractor shall prepare the deliverable as follows:

SCOPE: Analytical models, unique tools, supporting documentation, equipment and resource/cost information shall be submitted in accordance with this Data Requirement (DR).

CONTENTS:

- A catalog of models and tools provided according to any DR or SOW on this contract shall be developed which contains the following:
 - Unique name of item
 - Version number, revision number, or release date as appropriate
 - Abstract which describes purpose or use of item
 - Location of electronic copy (i.e. VMDB)
- Models and tools to be submitted include:
 - Models and tools developed/used in performance of this contract, but no other DRD shall be delivered in accordance with this DRD.
 - Models which are delivered per requirements contained in any other DR on this contract shall not be redelivered for this DR. However, each shall still be documented appropriately.
- Supporting documentation for the use of each item, including those submitted per other DRDs on this contract where that DRD doesn't require it, shall be submitted. The documentation shall include, at a minimum, the following information:
 - Purpose of the model or tool
 - Inputs required
 - Governing assumptions or constraints, including definition of the Vehicle configuration if pertinent to the model definition or its use
 - Model or tool certification history, including description of validation methods used and results of correlation activities
 - Association with other models, such as connection between an integrated ISS model and a supporting element model

- For models, necessary tools such as a specific software modeling environment required to operate the model
 - For tools, necessary platforms such as computer processor requirements or operating system limitations
- Data Items, for example, websites and internal work instructions developed for this contract that contains the following:
 - Unique name of item
 - Version number, revision number, or release date as appropriate
 - Abstract which describes purpose or use of item
 - Location of electronic copy (i.e. http://iss_www.jsc.nasa.gov/ss/issapt.....)
- Data package containing the following:
 - Labor resources:
 - List of all direct labor skills by labor category, segregated by current work breakdown structure (WBS)
 - An estimate of the number of indirect labor skills such as business or computer support normally charged through an indirect expense pool or through a service center expense
 - Current annual average wage rates for each labor category and when these wages were last adjusted for escalation. Also indicate whether any adjustments are projected to be made prior to contract expiration
 - The number of FTEs (Full Time Equivalents) and the estimated number of productive hours for each labor category currently on contract, segregated by current WBS.
 - Seniority level of all skills on the current contract
 - Non-labor resources:
 - List of all materials, equipment, travel, supplies, etc., and the incurred annual cost by WBS
 - Provide a discussion associated with the major items identified above, such as the materials estimate includes a prompt payment discount of TBD% due to large volume discounts you have negotiated with your vendors.
 - The projected liability cost associated with unused accrued paid leave associated with non-exempt personnel. Provide a copy of any Collective Bargaining Agreements in place and a current status of any upcoming negotiations with a union.
 - Equipment (additional information to that listed in #2, a., above):
List of all contractor-owned equipment (at the time of delivery of this DRD) being used in the performance of the contract. The list of equipment shall include:
 - Description of the equipment (include make and model #)
 - Location of the equipment (address, building and room #)
 - Date purchased
 - Purchase price of the equipment
 - Current depreciated value of the equipment

FORMAT: Electronic format of all submissions shall be compatible with ODIN desktop standard applications or other ISS standard tools. Organizational format of the supporting documentation shall be the contractor's format.

9. OPR: COTR

10. FIRST SUBMISSION DATE: 1 year prior to contract end or at the CO's direction.

Frequency Of Submission: No periodic submissions required per this DR (this does not relieve the requirement for periodic or incremental deliveries per other DRs)

Additional Submissions: End of period of performance: submission of current version of all models, tools, and supporting documentation which have been updated since first submission

11. MAINTENANCE: All models/tools and data items shall be maintained electronically. All documentation developed to support the use of each model/tool and data items shall also be maintained electronically. Both the models and the supporting documentation shall be updated as necessary to perform the assessments for which they were developed.

12. COPIES/DISTRIBUTION:

1 original/record (hard copy): OL/Data Management

1 electronic copy: Program Authorized Repository

13. REMARKS: It is only intended that unique models and tools developed for the ISS Program be delivered per this DR. Unmodified commercially available tools should not be delivered, but must be referenced in the supporting documentation.

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: NASA Property Financial Reporting	2. Date of current version 1/1/04	3a. DRD No. B-PR-04	3b. RFP/Contract No. NNJ04AA02C
1b. Data Type: 2			5. DRD Category — Technical X Administrative — SR&QA
4. Use (Define need for, intended use of, and/or anticipated results of data) Report NASA Property in the custody of contractors on both a quarterly and annual basis.			7. Interrelationships (e.g., with other DRDs)
6. References (SOW, Clause, etc.) Procurement Information Circular (PIC) 03-14 NASA FAR Supplement Subpart 1845.7101			

8. PREPARATION INFORMATION: The contractor shall prepare the report as follows:

SCOPE: Quarterly reporting shall be in compliance with NASA PIC 03-14. Annual reporting shall be in compliance with NASA FAR Supplement Subpart 1845.7101.

CONTENT:

(1). Quarterly Property Financial Reports are required to be submitted using the spreadsheet located at the URL referenced in paragraph (5)c below.

(2). Annual reports are required to be submitted using the NASA Form 1018. The annual report provides financial data on government-furnished and contractor-acquired property to which NASA has title. Contractors shall report on all NASA-owned property in US dollars (regardless of the location), including real property and equipment, special test equipment, special tooling, and agency peculiar property, as well as materials and contract work in process of any value in their possession (including subcontractors). Negative reports are required. This reporting shall be completed in accordance with the NASA FAR Supplement Subpart 1845.7101 and any supplemental guidance provided by the contracting officer.

(3). Acquisition costs shall be developed using actual costs to the greatest extent possible, especially costs directly related to fabrication such as labor and materials. Where estimates are used, there must be a documented basis. Supporting documentation shall be maintained and available for all amounts reported.

(4). Items that are considered obsolete in the plant clearance cycle or heritage assets must be reported separately. Obsolete property is property for which there are no current plans for use in their intended purpose. Examples of obsolete property are items in configurations which are no longer required or used by NASA or items held for engineering evaluation purposes only. NASA may have approved the retention of these items for programmatic reasons even though they have no current plans to be used.

(5). Quarterly Report General Instructions:

SUMMARY TAB - Complete a summary of property activity for the reporting period. The period would be defined as one quarter (3 months). Identify any amounts of obsolete, plant clearance, or heritage asset items in columns F-H.

ADJUSTMENTS TAB - List all adjustments (with explanation) that were reported in column B of the summary. Complete all fields where applicable.

EQUIPMENT TRANSACTIONS TAB - List all transactions {additions, deletions, or modifications of equipment, (including software)} accountable to this contract. For the purpose of this exercise, equipment includes general purpose, special test, special tooling, and agency peculiar property greater or equal to \$100,000. Complete all fields. The total of these items should equal columns C and D for lines 5 through 8 on the summary (tab one).

MATERIALS>=\$100K TAB - Provide a listing of all materials with a unit price of \$100,000 or more. Complete all fields. The total of these items should equal column E of line 10 on the summary (tab one).

CONTRACT WIP TAB - Provide a listing (including description of item(s) and related NASA program) of all Work In Process (WIP), which includes both construction in progress and contract work in process projects which have accumulated costs of \$100,000 or more. WIP consist of property items under development (i.e., not completed) and includes the costs of all WIP regardless of value for all categories of property, including real property, all types of equipment and material, as well as WIP for International Space Station and Space Shuttle components. Do not include the costs of WIP for other assets destined for permanent operation in space such as satellites and space probes and their components. If WIP amounts are not calculated by individual project, provide program, types of items and methodology for determining values. The total of these items should equal column E of line 11 on the summary (tab one).

HERITAGE ASSETS TAB - Include a listing of all heritage assets (any value) as of the end of the reporting quarter. Include all attributes listed.

FORMAT: Use NASA Form 1018 for the annual submission. The spreadsheet located at URL address <http://www.hq.nasa.gov/office/procurement/regs/PIC Attachment Quarterly Property.xls> must be used for the quarterly submissions (Note: Use Internet Explorer to access the spreadsheet)

9. OPR: JA/M. Caputo

10. SUBMISSION:

- a. The due dates for the Property Financial Reporting quarterly submissions are as follows:
 - July 21 for the quarter ending June 30
 - October 15 for the quarter ending September 30.
 - January 21 for the quarter ending December 31.

April 21 for the quarter ending March 31.

- b. The due date for the Financial Property annual submission (NASA Form 1018) is November 30.
- c. The quarterly and annual reports shall be submitted electronically.

11. MAINTENANCE

Revisions shall be incorporated by change page or complete reissue.

12. COPIES/DISTRIBUTION

The annual NASA Form 1018 shall be filed electronically through the NASA Form 1018 Electronic Submission System (NESS). The quarterly submission shall be filed electronically to NASACContractorProperty@nasa.gov and the JSC Delegated Property Administrator.

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Mission Assurance and Risk Management (MA&RM) Plan	2. Date of Current Version Jan 2004	3a. DRD No. B-SA-01	3b. RFP/Contract No. NNJ04AA02C
1b. Data Type: 1			
4. Use (Define need for, intended use of, and/or anticipated results of data) The plan is used to ensure that the contractor will use the correct policies, procedures, and processes to implement the requirements of Section 6.0 of the SOW.			5. DRD Category <input type="checkbox"/> Technical <input type="checkbox"/> Administrative <input checked="" type="checkbox"/> SR&QA
6. References SOW, Paragraph 6.1.1		7. Interrelationships	

Deleted: 9-BG-79-2-78P1
NAS 9 - 03003

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

SCOPE: Applicable to all NASA Centers and sites where the contractor is operational under this contract.

CONTENT: The plan shall demonstrate the contractor's compliance with meeting Section 6.0 of the SOW:

- a. S&MA Management (SOW 6.1) – Description of the contractor's processes for establishing and maintaining a Quality Management System in accordance with Model for Quality Assurance in Design/Development, Production, Installation and Servicing (SAE AS9100), Mishap Investigation and Reporting in accordance with NASA Procedures and Guidelines for Mishap Reporting, Investigating, and Recordkeeping (NPG 8621.1), Lessons Learned in accordance with NASA Program and Project Management Processes and Requirements (NPG 7120.5), JSC Lessons Learned Process (AG-CWI-001) and a Safety Motivation and Awards Program (NPG 8715.3, Paragraph 1.14).
- b. S&MA Integration (SOW 6.2) – Description of the contractor's process for assessing ISS change requests and operational decisions, and performing the S&MA assessment required for CoFR.
- c. Program Risk (SOW 6.3) – Description of the contractor's process for compliance with the Integrated Risk Management Plan (SSP 50175) and Establishment of the Program Risk Management System (JPD 306).
- d. Safety Program (SOW 6.4) - Description of the contractor's process for compliance with ISS Generic Ground Rules and Constraints (SSP 50261-01 and -02), Safety Review Process (SSP 30599), Safety Analysis and Risk Assessment Requirements Document (SSP 30309), Safety Requirements Document (SSP 50021), and required verification for safety requirements and hazard controls.

FORMAT: Format supported by MS Word

9. OPR: OE

10. FIRST SUBMISSION DATE: The MA&RM Plan shall be submitted in draft form with the proposal and revised for approval within 30 days after contract start.

Frequency Of Submission: The MA&RM Plan shall be reviewed at least annually thereafter and updated as required.

Additional Submissions: If there are no changes since the last update, the Contractor shall re-certify its accuracy NLT 1 October of each year.

11. MAINTENANCE: The document shall be delivered and maintained electronically. Changes shall be incorporated as required by change page or complete reissue.

12. COPIES/DISTRIBUTION: (Per Contracting Officer's letter)

1 original/record (hard copy): OL/Data Management

1 copy (electronic): Program authorized repository (PALS or equivalent)

13. REMARKS: The MA&RM Plan requires approval from the Manager, S&MA/Program Risk Office.

NASA Data Management will send notification to the following:
OE/Safety and Mission Assurance/Program Risk

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: Safety & Health (S&H) Plan 1b. Data Type: 1	2. Date of Current Version <p style="text-align: center;">Jan 2004</p>	3a. DRD No. <p style="text-align: center;">B-SA-02</p>	3b. RFP/Contract No. <p style="text-align: center;">NNJ04AA02C</p>
4. Use (Define need for, intended use of, and/or anticipated results of data) The plan is used to establish Safety, Health, and Environmental Compliance for the contractor in meeting NASA and OSHA Standards.			5. DRD Category <input type="checkbox"/> Technical <input type="checkbox"/> Administrative <input checked="" type="checkbox"/> SR&QA
6. References SOW, Paragraph 6.1.5; NPG 8715.3; JSC 1700.1		7. Interrelationships	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

SCOPE: Applicable to safety at health activity at all NASA Centers and sites where the contractor is operational under this contract.

CONTENT: The plan shall demonstrate the contractor's compliance with NFS Clause 1852.223-73, NASA Safety Manual (NPG 8715.3), JSC Safety and Health Handbook (JPG 1700.1), and Kennedy Space Center Safety Practices Handbook (KHB 1710.2). The contractor shall address the use of KSC Form 6-22, Safety Statistics Records, for those events that occur at KSC. In addition, the plan shall be consistent with NPG 8715.3, Appendix H, and address the following:

1. MANAGEMENT LEADERSHIP AND EMPLOYEE PARTICIPATION

- 1.1. Policy. Provide the contractor's safety, health, and environmental compliance policy statement with the plan. Compare the contractor's policy statement with those of NASA and OSHA and discuss any differences.
- 1.2. Goals and Objectives.
 - 1.2.1. Describe specific safety and health goals and objectives to be met. Discuss status of safety program using the "Performance Evaluation Profile" as safety performance criteria. Describe the contractor's approach to continuous improvement (including milestone schedule) using level 5 of the Performance Evaluation Profile as a guideline.
 - 1.2.2. Describe (where applicable) Environmental Goals & Objectives to be met for the following:
 - 1.2.2.1. Pollution Prevention and Source Reduction of:
 - 1.2.2.1.1. Hazardous and Industrial Solid Wastes
 - 1.2.2.1.2. Solid Wastes (trash, refuse)
 - 1.2.2.1.3. Wastewater Discharges (sanitary sewerage)
 - 1.2.2.1.4. Air Emissions
 - 1.2.2.1.5. Medical & Radiological Discharges
 - 1.2.2.2. Affirmative Procurement (Purchase of Environmentally Preferable Materials IAW Executive Order)
 - 1.2.2.3. Hazardous Materials Handling/Purchasing/Reduction/Replacement
 - 1.2.2.4. Elimination from Specifications and Standards requirements for the use of Hazardous/Toxic Substances & Materials
 - 1.2.2.5. Use of an Environmental Planning Checklist to review & document Impacts of New and Modified Programs, Projects, Activities and Operations.
 - 1.2.2.6. Life cycle analysis and costing
 - 1.2.2.7. Incorporating Environmental Requirements in Subcontracts
 - 1.2.2.8. Participation in JSC Recycling
 - 1.2.2.9. Outreach programs
 - 1.3. Management Leadership. Describe management's procedures for implementing its commitment to safety, health, and environmental compliance through visible management activities and initiatives,

including a commitment to exercise management prerogatives to ensure workplace safety and health. Describe processes and procedures to making this visible in all contract and subcontract activities and products. Include a statement from the project manager or designated safety official indicating that the plan will be implemented as approved and that the project manager will take personal responsibility for its implementation.

- 1.4. Employee Involvement. Describe procedures to promote and implement employee (e.g., non-supervisory) involvement in safety, health, and environmental compliance program development, implementation and decision-making. Describe the scope and breadth of employee participation to be achieved so that approximate safety and health risk areas of the contract are equitably represented.
- 1.5. Assignment of Responsibility. Describe line and staff responsibilities for safety and health program implementation. Identify any other personnel or organization that provides safety services or exercises any form of control or assurance in these areas. State the means of communication and interface concerning related issues used by line, staff, and others (such as documentation, concurrence requirements, committee structure, sharing of the work site with NASA and other contractors, or other special responsibilities and support.) As a minimum, the contractor will identify the following:
 - 1.5.1. Safety Representative - identify by title the individual who will be trained and certified in accordance with JPG 1700.1 to be responsive to Center-wide safety, health, environmental, and fire protection concerns and goals, and who will participate in meetings and other activities related to the JSC Safety and Health program.
 - 1.5.2. Company Physician/Occupational Injury/illness case manager - identify a point of contact who is responsible for the transfer or receipt of company medical data and who will be the primary contact for the company in the event any employee suffers a work related injury or illness (such as the company physician) by name, address, and telephone number to the JSC Clinic, mail code SD22. This will facilitate communication of medical data to contractor management. Prompt notification to the JSC Occupational Health/ Clinic shall be given of any changes that occur in the identity of the point of contact. A letter to the JSC Occupational Health Office can accomplish initial identification of point of contact and subsequent updates with a copy sent to the Contracting Officer. The initial letter is to be received by the Government prior to contract start.
 - 1.5.3. Building Fire Wardens - provide a roster of fire wardens (their names, phone numbers and pagers, and mail codes). Contractor fire wardens are needed to facilitate the JSC fire safety program, including coordination of related issues with NASA facility managers and emergency planning and response officials and their representatives. Fire wardens will be trained in accordance with JPG 1700.1. The roster shall be maintained by letter to JSC Occupational Safety, mail code NS2, with copies to the Contracting Officer and Contracting Officer's Technical Representative. The initial letter shall be received by the Government not later than 15 days after contract start.
 - 1.5.4. Designated Safety Official - identify by title the official(s) responsible for implementation of this plan and all formal contacts with regulatory agencies and with NASA.
- 1.6. Provision of Authority. Describe consistency of the plan for compliance with applicable NASA and JSC requirements and contractual direction as well as applicable Federal, state, and local regulations and how compliance will be maintained throughout the life of the contract.
- 1.7. Accountability. Describe procedures for ensuring that management and employees will be held accountable for implementing their tasks in a safe and healthful and environmentally compliant manner. The use of traditional and/or innovative personnel management methods (including discipline, motivational techniques, or any other technique that ensures accountability) will be referenced as a minimum and described as appropriate.
- 1.8. Program Evaluation. The program evaluation consists of:
 - 1.8.1. Participation in a Performance Evaluation Profile (PEP) survey at the request of the Government. The PEP survey normally will be scheduled and administered at the discretion of the Government. If the Government chooses not to do the PEP in a given year, the contractor may at its option initiate its own PEP by contacting JSC Occupational Safety, code NS2, for assistance. The contractor will not be required to take two or more PEP surveys in any contract year.

- 1.8.2. [Reserved.]
- 1.8.3. A written self-evaluation report to be delivered by Sept 30 of each year. The self-evaluation shall follow the VPP program evaluation report format found in OSHA TED 8.4, Voluntary Protection Programs (VPP) Policies and Procedures Manual, Appendix H, "Format for Program Evaluation Report", as mandated by the cognizant OSHA regional office. Contractors who have submitted a written self-evaluation as a VPP site may submit their original report to OSHA in lieu of writing a new self-evaluation provided that all action plans and status are updated. The self evaluation shall as a minimum cover the elements of the approved safety and health plan.
- 1.8.4. Miscellaneous Reports. The contractor will acknowledge the following as standing requests of the Government and to be handled as described below.
- 1.8.4.1. Roster of Terminated Employees. Identify personnel terminated by contractor. Send to the JSC Occupational Health Officer, mail code SD13, no later than 30 days after the end of each contract year or at the end of the contract, whichever is applicable. At the contractor's discretion, the report may be submitted for personnel changes during the previous year or cumulated for all years. Information required:
- 1.8.4.1.1. Date of report, contractor identity and contract number.
- 1.8.4.1.2. For each person listed, provide name, social security number, and date of termination.
- 1.8.4.1.3. Name, address, and telephone number of contractor representative to be contacted for questions or other information.
- 1.8.4.2. Material Safety Data. The contractor shall prepare and/or deliver Material Safety Data for hazardous materials brought onto Government property or included in products delivered to the Government. This data is required by the Occupational Safety and Health Administration (OSHA) regulation, 29 CFR 1910.1200, "Hazard Communication", EPA "Emergency Planning and Community Right-to-Know (EPCRA, ref. 40 CFR 302, 311, 312); and the Texas Department of Health (TDH, ref. Chapters 505-507 of the Health and Safety Code), and Federal Standard 313 (or FED-STD-313), "Material Safety Data, Transportation Data and Disposal Data for Hazardous Materials Furnished to Government Activities", as revised. 1 copy of each MSDS will be sent upon receipt of the material for use on NASA property to the JSC Central Repository, Occupational Health and Test Support, Mail Code SD13, along with information on new or changed locations and/or quantities normally stored or used. If the MSDS arrives with the material and is needed for immediate use, the MSDS shall be delivered to the Central Repository by close of business of the next working day after it enters the site.
- 1.8.4.3. Hazardous Materials Inventory. The contractor shall compile an inventory report of all hazardous materials it has located on Government property not less than annually, and which is within the scope of 29 CFR 1910.1200, "Hazard Communication"; and Federal Standard 313 (or FED-STD-313), "Material Safety Data, Transportation Data and Disposal Data for Hazardous Materials Furnished to Government Activities", as revised. The call for this annual inventory and instructions for delivery will be issued by the JSC Occupational Health and Test Support Office, mail code SD13. This information shall use the format used by JSC for chemical inventory compilation to provide the following:
- 1.8.4.3.1. the identity of the material;
- 1.8.4.3.2. the location of the material by building and room;
- 1.8.4.3.3. the quantity of each material normally kept at each location
- 1.8.4.3.4. peak quantity stored
- 1.8.4.3.5. actual or estimated rate of annual usage of each chemical
- 1.9. Government Access to Safety and Health Program Documentation. The contractor shall recognize in its plan that it will be expected to make all safety, health, and environmental documentation (including relevant personnel records) available for inspection or audit at the Government's request. Electronic access by the Government to this data is preferred as long as Privacy Act requirements are met and Government safety and health professionals and their representatives have full and unimpeded access for review and audit purposes. For contractor activities conducted on NASA

property, the contractor will identify what records it will make available to the Government in accordance with the Voluntary Protection Program criteria of OSHA as implemented in JPG 1700.1, "JSC Safety and Health Handbook", as revised. For the purpose of this plan, safety, health, and environmental compliance documentation includes but is not limited to logs, records, minutes, procedures, checklists, statistics, reports, analyses, notes, or other written or electronic document which contains in whole or in part any subject matter pertinent to safety, health, environmental protection, or emergency preparedness.

- 1.10. The contractor may be requested to participate in the review and modification of safety requirements that are to be implemented by the Government including any referenced documents therein. This review activity will be implemented at the direction of the NASA Contracting Officer's Technical Representative in accordance with established NASA directives and procedures.
- 1.11. Procurement. Identify procedures used to assure that procurements are reviewed for safety, health and environmental compliance considerations and that specifications contain appropriate safety criteria and instructions. Set forth authority and responsibility to assure that safety tasks are clearly stated in subcontracts.
- 1.12. Certified Professional Resources. Discuss your access to certified professional resources for safety, health, and environmental protection. Discuss their roles in motivation/awareness, worksite analysis, hazard prevention and control, and training.
2. **WORKSITE ANALYSIS:** Hazards shall be systematically identified through a combination of surveys, analyses, and inspections of the workplace, investigations of mishaps and close calls, and the collection and trend analysis of safety and health data such as: records of occupational injuries and illnesses; findings and observations from preventive maintenance activities; reports on hazardous substance spills and inadvertent releases to the environment; facilities related incidents related to partial or full loss of systems functions; etc. Hazards identified by any of the techniques identified below shall be ranked and processed in accordance with JPG 1700.1. All hazards on NASA property, which are immediately dangerous to life or health, shall be reported immediately to the Occupational Safety Office. All safety engineering products that address operations, equipment, etc., on NASA property will be subject to JSC SR&QA review and concurrence unless otherwise waived by the JSC Occupational Safety Office.
 - 2.1. Industrial Hygiene. Describe your industrial hygiene program and how it will be coordinated with the JSC government provided resources for industrial hygiene. In the event corporate resources are used to determine workplace exposures, copies of all monitoring data shall be provided to JSC Occupational Health within 15 days of receipt of results.
 - 2.2. Hazard Identification. Describe the procedures and techniques to be taken to compile an inventory of hazards associated with the work to be performed on this contract. This inventory of hazards shall address the work specified in this contract as well as operations and work environments in the vicinity or in close proximity to contract operations. The results will be reported to the Government in a manner suitable for inclusion in facilities baseline documentation as a permanent record of the facility. Specific techniques to be considered include:
 - 2.2.1. Comprehensive Survey – A "wall to wall" engineering assessment of the work site including facilities, equipment, processes, and materials (including wastes – (TNRCC/EPA solid & hazardous, radioactive, explosives, medical-infectious-biological). The comprehensive survey will establish a baseline of hazards that may put contract assets at risk as early as is feasible, preferably at contract start.
 - 2.2.2. Change (Pre-use) Analysis – Typically addresses modifications in facilities, equipment, processes, and materials (including waste); and related procedures for operations and maintenance. Change analyses periodically will be driven by new or modified regulatory and NASA requirements.
 - 2.2.3. Hazard Analysis – may address facilities, systems/subsystems, operations, processes, materials (including waste), and specific tasks or jobs. Analyses and report formats will be in accordance with JSC 17773, "Preparing of Hazard Analyses for JSC Ground Operations."
 - 2.3. Inspections.
 - 2.3.1. Routine Inspections. Includes assignments, procedures, and frequency for regular inspection and evaluation of work areas for hazards and accountability for implementation of corrective measures. The contractor will describe administrative requirements and procedures for control of and regularly scheduled inspections for fire and explosion hazards. The contractor

has the option, in lieu of this detail, to identify policies and procedures with the stipulation that the results (including findings) of inspections conducted on NASA property or involving Government furnished property will be documented in safety program evaluations or the monthly Accident/Incident Summary reports. Inspections will identify

- 2.3.1.1. Discrepancies between observed conditions and current requirements, and
- 2.3.1.2. New (not previously identified) or modified hazards.
- 2.3.2. Protective Equipment. Set forth procedures for obtaining, inspecting, and maintaining all appropriate protective equipment, as required, or reference written procedure pertaining to this subject. Set forth methods for keeping records of such inspections and maintenance programs.
- 2.4. Employee Reports of Hazards – identification of methods to encourage employee reports of hazardous conditions (e.g., close calls) and analyze/abate hazards. The contractor will describe steps it will take to create reprisal-free employee reporting with emphasis on management support for employees and describe methods to be used to incorporate employee insights into hazard abatement and motivation / awareness activities.
- 2.5. Accident and Record Analysis.
 - 2.5.1. Mishap Investigation – identification of methods to assure the reporting and investigation of mishaps including corrective actions implemented to prevent recurrence. The contractor will describe the methods to be used to report and investigate mishaps on NASA property and on contractor or third party property. The contractor will describe its procedures for implementing use of NASA forms as specified in JSC 1700.1 and alternate forms used by contractor with emphasis on timely notification of NASA; investigation procedures; exercise of jurisdiction over a mishap investigation involving NASA and other contractor personnel; follow up of corrective actions; communication of lessons learned to NASA; and solutions to minimize duplications in reporting and documentation including use of alternate forms, etc. The contractor will discuss its procedures for immediate notification requirements for fires, hazardous materials releases, and other emergencies. The contractor will include appropriate details to address the use of NASA Form 1627, “Mishap Report” (or equivalent), including 24-hour and ten-day mishap reports to JSC Occupational Safety, mail code NS2. Note: the NASA Form 1627 is not attached since it is a three part carbonless form not conducive to reproduction. This form can be obtained from JSC’s Printing Services.
 - 2.5.2. Trend Analysis – describe approach to performing trend analysis of data (occupational injuries and illnesses; facilities, systems, and equipment performance; maintenance findings; etc.) Discuss methods to identify and abate common causes indicated by trend analysis. In support of site-wide trend analysis to be performed by the Government, the contractor will discuss method of providing data as follows:
 - 2.5.2.1. Accident/Incident Summary Report. The contractor shall prepare and deliver Accident/Incident Summary Reports as specified on JSC Form 288, “Accident / Incident Statistics” (attached), as revised. All new and open mishaps, including vehicle accidents, incidents, injuries, fires, and close calls shall be described in summary form along with current status. Negative reports are also required monthly. Report frequency is monthly; Date due is the 10th day of the month following each month reported. Report to be delivered to the JSC Safety, Reliability, and Quality Assurance Office through the Occupational Safety Office, mail code NS2, by fax to 281-244-0426 or by attaching to an e-mail and transmitting to mishaps@ems.jsc.nasa.gov.
 - 2.5.2.2. Log of Occupational Injuries and Illnesses. For each establishment on and off NASA property that performs work on this Contract, the Contractor shall deliver to the Government a copy of its annual summary of occupational injuries and illnesses (or equivalent) as described in Title 29, Code of Federal Regulations, Subpart 1904.5. Copy of all summaries as required above under Contractor’s cover letter. If contractor is exempt by regulation from maintaining and publishing such logs, equivalent data in contractor’s format is acceptable (such as loss runs from insurance carrier) which contains the data required by JSC Form 288. Data shall be compiled and reported by calendar year and provided to the Government within 45 days after the end of the year to be reported (e.g. not later than February 15 of the year following.)
- 3. **HAZARD PREVENTION AND CONTROL:** Identified hazards must be eliminated or controlled. In the multiple employer environment of the center, it is required that hazards including discrepancies and

corrective actions be collected in a center wide information system (Hazard Abatement Tracking System (HATS) for risk management purposes. Describe your approach to implementing this requirement.

- 3.1. Appropriate Controls. Discuss approach to consideration and selection of controls. Discuss use of hazard reduction precedence sequence (see JPG 1700.1). Discuss approach to identifying and accepting any residual risk. Discuss implementation of controls including verifying effectiveness. Discuss scope of coverage (hazardous chemicals, equipment, discharges, waste, energies, etc.). Discuss need for coordination with safety, health, environmental services, and emergency authorities at NASA.
- 3.2. Hazardous Operations and Processes. Establish methods for notification of personnel when hazardous operations and processes are to be performed in their facilities or when hazardous conditions are found to exist during the course of this contract. JPG 1700.1 will serve as a guide for defining, classifying, and prioritizing hazardous operations; 29 CFR 1910.119 will be the guide for hazardous processes. Develop and maintain a list of hazardous operations and processes to be performed during the life of this contract. The list of hazardous operations and processes will be provided to JSC as part of the plan for review and approval. JSC and the Contractor will decide jointly which operations and processes are to be considered hazardous, with JSC as the final authority. Before hazardous operations or processes commence, the Contractor will develop a schedule to develop written procedures with particular emphasis on identifying the job safety steps required. NASA will have access on request to any contractor data necessary to verify implementation. For all identified operations or processes that may have safety or health implications outside contract operations, the contractor shall identify such circumstances to the JSC Occupational Safety Branch and Occupational Health and Test Support Office who will provide additional instructions for further NASA management review and approval.
- 3.3. Written Procedures. Identification of methods to assure that the relevant hazardous situations and proper controls are identified in documentation such as inspection procedures, test procedures, etc., and other related information. Describe methods to assure that written procedures are developed for all hazardous operations, including testing, maintenance, repairs, and handling of hazardous materials and hazardous waste. Procedures will be developed in a format suitable for use as safety documentation (such as a safety manual) and be readily available to personnel as required to correctly perform their duties.
- 3.4. Hazardous Operations Permits. Identify facilities, operations and/or tasks where hazardous operations permits will be required as specified in JPG 1700.1 such as confined space entry, hot work, etc.) Set forth guidance to adhere to established NASA JSC procedures. Clearly state the role of the safety group or function to control such permits.
- 3.5. Operations Involving Potential Asbestos Exposures. Set forth method by which compliance is assured with JSC Asbestos Control Program as established in JPG 1700.1, as revised, and JPG 8800.1, "Asbestos Control Manual," as revised.
- 3.6. Operations Involving Exposures to Toxic or Unhealthful materials. Such operations must be evaluated by the JSC Occupational Health Office and must be properly controlled as advised by same. JSC Occupational Health Office must be notified prior to initiation of any new or modified operation potentially hazardous to health.
- 3.7. Environmental Operations & Activities
 - 3.7.1. Operations Involving Hazardous Waste. Identify procedures used to manage hazardous waste from point of generation through disposal. Clearly identify divisions of responsibility between contractor and NASA for hazardous waste generated throughout the life of the contract. Operations that occur on site at JSC, SCTF, or Ellington Field must be evaluated by the JSC Environmental Services Office and must be properly controlled as advised by same. JSC Environmental Services Office must be notified prior to initiation of any new or modified operations, equipment, systems, or activities generating new hazardous wastes or where the chemicals change or there are volume increases of 25% or more on site at JSC, SCTF, or Ellington Field.
 - 3.7.2. Operations Involving New or Modified Emissions/Discharges to the Environment. Set forth methods for identifying new or modified emissions/discharges and coordinating results with the Environmental Services Office, mail code JA131. Set forth a plan of procedures to conduct pollution prevention, waste minimization or source reduction/elimination of environmental pollution. Address management and continuous improvement for the reduction

of hazardous materials; substitution of non-hazardous or less hazardous materials for hazardous materials; proper segregation of hazardous wastes from non-hazardous wastes; and other methods described by NASA, EPA, GSA, and Executive Order recycled content / affirmative procurement purchases . The JA131/Environmental Office is the single point of contact for coordinating all JSC environmental permits . Emphasis shall be placed on providing for sufficient lead time for processing permits through the appropriate state agency and/or the Environmental Protection Agency.

- 3.8. Discuss your responsibilities for maintaining facilities baseline documentation in accordance with JSC requirements. The contractor will implement any facilities baseline documentation tasks (including safety engineering) as provided in the contractor's plan approved by NASA or as required by Government direction.
- 3.9. Preventive Maintenance. Discuss approach to preventive maintenance. Describe scope, frequency, and supporting rationale for your preventive maintenance program including facilities and /or equipment to be emphasized or de-emphasized. Discuss methods to promote awareness in the NASA community (such as alerts, safety flashes, etc.) when preventive maintenance reveals design or operational concerns in facilities and equipment (and related processes where applicable).
- 3.10. Medical (Occupational Healthcare) Program. Discuss your medical surveillance program and injury/illness case management to evaluate personnel and workplace conditions to identify specific health issues and prevent degradation of personnel health as a result of occupational exposures. Discuss approach to Cardiopulmonary Resuscitation (CPR), first aid, and , return to work policies and the use of government provided medical and emergency facilities for the initial treatment of occupational injuries/illnesses.
- 3.11. Hazard Correction and Tracking. Discuss your system for correcting and tracking safety, health, and environmental hazards with particular emphasis on integration with JSC's Hazard Abatement Process (found online at <http://wwwsrqa.jsc.nasa.gov/HATS/>). (The scope is restricted to establishments at JSC, Sonny Carter Training Facility, and Ellington Field.) This includes the following:
 - 3.11.1. Personnel awareness of hazards. Discuss your approach to communicate unsafe conditions and approved countermeasures to your employees. Discuss your approach to communicating such conditions to the Government and other contractors whose personnel may be exposed to such unsafe conditions. Discuss communications with facility managers. Discuss use of the NASA Lessons Learned Information System for both obtaining lessons from other sources and as a repository for lessons learned during performance of the contract.
 - 3.11.2. Interim and Final Abatement Plans. Describe how you will approach interim and final abatement of hazards. Describe how you will provide data to the JSC Hazard Abatement Tracking System for all hazards that are not finally abated (all interim and final abatement actions completed) within 30 days of discovery. Discuss your approach to posting such plans using JSC Form 1240, "JSC Notice of Safety or Health Hazard and Action Plan", or equivalent. Discuss compatibility of your system with JSC's the role of facility managers in abatement planning, implementation, and verification.
- 3.12. Disciplinary System. Describe your system for ensuring safety and health discipline in your personnel (including subcontractors). Describe your approach to modifying personnel behaviors when personnel are exhibiting discrepant safety and health performance.
- 3.13. Emergency Preparedness. Discuss approach to emergency preparedness and contingency planning which addresses fire, explosion, inclement weather, environmental spill /releases, etc. Discuss compliance with 29 CFR 1910.120 (HAZWOPER) and role in JSC Incident Command System (see JPG 1700.1 for details). Discuss methods to be used for notification of JSC emergency forces including emergency dispatcher, safety hotline, director's safety hotline, etc. Discuss establishment of pre-planning strategies through procedures, training, drills, etc. Discuss methods to verify emergency readiness.
4. **SAFETY AND HEALTH TRAINING:** Describe the contractor's training program including identification of responsibility for training employees to assure understanding of safe work practices, hazard recognition, and appropriate responses for protective and/or emergency countermeasures, including training to meet federal, state, and local regulatory requirements. In doing so, the contractor will factor parallel requirements found in other mandates such as environmental protection [example: 29 CFR 1910.38 for emergency action plans and fire prevention plans versus EPA Resource Conservation & Recovery Act

(RCRA) for Emergency Planning and Community Right-to-know (EPCRA).] Describe approach to identifying training needs including traceability to exercises such as job safety analyses, performance evaluation profiles, hazard analyses, mishap investigations, trend analyses, etc. Describe approach to training personnel in the proper use and care of protective equipment (PPE). Discuss tailoring of training towards specific audiences (management, supervisors, and employees) and topics (safety orientation for new hires, specific training for certain tasks or operations). Discuss approach to ensure that training is retained and practiced. Discuss personnel certification programs. Certifications should include documentation that training requirements and physical conditions have been satisfied (examples include physical examination, testing, and on-the-job performance). Address utilization of JSC safety and health training resources (such as asbestos worker training/certification, hazard communication, confined space entry, lockout/tag-out, etc.) as appropriate with particular emphasis on programs designed for the multiple employer work environment on NASA property. All training materials and training records will be provided to NASA, and other federal, State, and local agencies for their review upon request. If the contractor wishes to train their personnel in any regulatory mandated training, an agreement will be secured with JSC Occupational Safety Branch and Occupational Health and Test Support office prior to beginning training. The agreement will ensure that safety and health training resources available from NASA are utilized where appropriate and to ensure that contractor-supplied training is in agreement with JSC safety and health processes

FORMAT: Electronic

9. OPR: OE

10. FIRST SUBMISSION DATE: The Safety and Health Plan shall be submitted in final form with the proposal.

Frequency Of Submission: The plan shall be reviewed at least annually thereafter and updated, as required.

Additional Submissions: If there are no changes since the last update, the Contractor shall re-certify its accuracy NLT 1 October of each year.

11. MAINTENANCE: The document shall be delivered and maintained electronically. Changes shall be incorporated as required by change page or complete reissue.

12. COPIES/DISTRIBUTION: (Per Contracting Officer's letter)

1 original/record (hard copy): OL/Data Management

1 copy (electronic): Program authorized repository (PALS or equivalent)

13. REMARKS: The S&H Plan requires approval from the Manager, S&MA/Program Risk Office. The final plan, as approved by the Contracting Officer, shall be incorporated in the contract as Attachment J-3.

NASA Data Management will send notification to the following:

NS/Safety and Test Operations Division

SD26/Occupational Health Officer

JA131 / Environmental Services

Contracting Officer's Technical Representative

DATA REQUIREMENTS DESCRIPTION**(Based on JSC-STD-123)**

1a. DRD Title Monthly Safety & Health Metrics	2. Date of Current Version 01/28/03	3a. DRD No. B-SA-03	3b. RFP/Contract No. NNJ04AA02C
1b. Data Type: 3	4. Use (Define need for, intended use of, and/or anticipated results of data) Establishes selected Safety and Health Program metrics in accordance with OSHA and JSC Requirements		5. DRD Category ___ Technical ___ Administrative _X_ SR&QA
6. References SOW, Paragraph 6.1.5		7. Interrelationships)	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

SCOPE: Reflect the Safety and Health activity at the NASA Centers and sites where the contractor is operational under this contract.

CONTENT: The safety and health metrics shall be in accordance with the Safety and Health Plan and JSC Safety and Total Health Handbook (JPG 1700.1).

1. Management Commitment and Employee Involvement - Dates and types of meetings (i.e. Safety Committee Meetings, Employee Safety Meetings, etc), and number of management, supervisors & non-supervisory attendees. Include electronic copies of minutes or representative information.
2. Worksite Analysis - Number of required and performed hazard analyses, job safety analyses and routine inspections for reported month and year-to-date.
3. Hazard Prevention and Control - Identified hazards found during routine and special inspections, close calls, mishap investigations, etc., and require correction. Report number found, closed and open during reported month, previous month and year-to-date. Also, include number of JF 1240's in place. Attach copies of JF 1240's (or equivalent) or send electronically. Indicate JF 1240's where abatement has been completed as closed.
4. Safety and Health Training - List courses specific to loss control initiatives (such as slips/trips falls, material handling; etc.) and report number to be trained, completed training and schedule of training. Report other training as "Generic safety training not otherwise specified" (examples include Hazard Communication, Confined Space entry, HAZWOPER, system safety, job safety analysis, etc.) Do not include job proficiency course work where safety is an issue (such as radiography, welding, painting, etc.)

(Note: Refer to JPG 1700.1 and OSHA requirements for definitions of terms.)

FORMAT: Format supported by ISS Management Information System

9. OPR: OE

10. FIRST SUBMISSION DATE: Contract start plus one month and 10 days

Frequency Of Submission: Monthly by the 10th of the month following the month being reported

Additional Submissions: N/A

11. MAINTENANCE: The document shall be maintained electronically.

12. COPIES/DISTRIBUTION:

1 original/record (hard copy): OL/Data Management

1 electronic copy: Program authorized repository (PALS or equivalent)

13. REMARKS:

NASA Data Management will send notification to the following:

NS/Safety and Test Operations Division

SD26/Occupational Health Officer

DATA REQUIREMENTS DESCRIPTION
(Based on JSC-STD-123)

1a. DRD Title: Safety and Health Program Self-Evaluation	2. Date of Current Version 01/30/03	3a. DRD No. B-SA-04	3b. RFP/Contract No. NNJ04AA02C
1b. Data Type: 3			
4. Use (Define need for, intended use of, and/or anticipated results of data) To provide Self-Evaluation of Contractor's safety and health program performance.			5. DRD Category <input type="checkbox"/> Technical <input type="checkbox"/> Administrative <input checked="" type="checkbox"/> SR&QA
6. References SOW, Paragraph 6.1.5		7. Interrelationships	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

SCOPE: Applicable to safety at health activity at all NASA Centers and sites where the contractor is operational under this contract.

CONTENT: The Contractor shall conduct an annual self-evaluation of its safety and health program, as required by its Safety and Health Plan and in accordance with JSC Safety and Total Health Handbook (JPG 1700.1). The following information is required as a minimum:

1. The internal assessment of safety and health program effectiveness during the report period (i.e., the previous year) indicating the status of goals or objectives previously established and areas of strength and weakness in Contractor safety program performance.
2. Safety and health concerns and resolutions relating to JSC operations that which have been identified during the report period.
3. Unresolved safety and health concerns relating to JSC operations which the Contractor feels merit attention of JSC safety and health management.
4. The goals and objectives of the Contractor safety and health program for the next report period.
5. An analysis of the contractor's performance at JSC administered establishments in each of the 32 Voluntary Protection Program sub-elements as found in the Federal Register Notice 65:45649-45663, July 24, 2000
6. Action plans shall be attached for identified problem areas. Action plans shall include schedule for periodic progress reports to the Government on a frequency agreed to by the Government and the Contractor for each problem area.

FORMAT: Format to be as required by the cognizant OSHA regional office. Contractors who have submitted a written self-evaluation as a VPP site may submit their original report to OSHA in lieu of writing a new self-evaluation provided that all action plans and status are updated.

9. OPR: OE

10. FIRST SUBMISSION DATE: September 30, 2004

Frequency Of Submission: Annually, September 30th of each year

Additional Submissions: N/A

11. MAINTENANCE: The document shall be maintained electronically.

12. COPIES/DISTRIBUTION:

1 original/record (hard copy): OL/Data Management

1 electronic copy: Program authorized repository (PALS or equivalent)

13. REMARKS:

NASA Data Management will send notification to the following:
 NS/Safety and Test Operations Division
 SD26/Occupational Health Officer

DATA REQUIREMENTS DESCRIPTION

(Based on JSC-STD-123)

1a. DRD Title: Hazard Reports and System Description	2. Date of Current Version <p style="text-align: center;">01/30/03</p>	3a. DRD No. <p style="text-align: center;">B-SA-05</p>	3b. RFP/Contract No. <p style="text-align: center;">NNJ04AA02C</p>
1b. Data Type: 2			5. DRD Category — Technical — Administrative <u>X</u> SR&QA
4. Use (Define need for, intended use of, and/or anticipated results of data) The contractor will ensure safety of crew and ISS by using the Hazard Reports and System Description to assess the mission integration and operation of ISS.			7. Interrelationships
6. References SOW, Paragraph 6.4		7. Interrelationships	

8. PREPARATION INFORMATION: The contractor shall prepare the DRD as follows:

SCOPE: Submittals shall consist of Hazard Reports and System Descriptions (as defined in “Content”) on flight and/or stage specific integrated safety assessments for operation of the ISS vehicle for compliance with Section J-1, SOW 6.4.

CONTENT: The Hazard Reports and System Descriptions shall document the program approach for executing the safety process in accordance with Safety Analysis and Risk Assessment Requirements Document (SSP 30309).

1. System Description: The Contractor shall provide a description of the on-orbit ISS Operations in accordance with Safety Review Process (SSP 30599). Functional diagrams shall be submitted and supplemented with descriptions of interfaces and operations.
2. Hazard Report: Hazard Reports shall include the following data fields:
 - Hazard Report Number
 - Hazard Title
 - Review Level
 - Revision Date
 - Scope
 - Hazard Description
 - Cause Summary
 - Program Stage
 - Interfaces
 - Status of Work
 - Remarks
 - Submittal Concurrence
 - Approval
 - Mission Phase
 - Severity Category
 - Likelihood of Occurrence
 - Controls
 - Method for Verification of Controls
 - Safety Requirements
 - Detection and Warning Method
 - Cause Remarks
 - CIL Reference
 - Point of Contact

Note: The Hazard Reports and System Descriptions for “Mission Integration” does not follow submittal and approval of the typical Phase I, Phase II, and Phase III deliveries. The uniqueness of the safety assessments requires a “content level” commensurate with the maturity of a Phase III submittal, including verification of the established controls. This is required as the “System Description” needed to process the hazard report is finalized only months before flight.

FORMAT: These deliverables shall be in the format described in SSP 30599.

9. OPR: OE

10. FIRST SUBMISSION DATE: 60 days prior to the first flight where the Contractor takes responsibility for Mission Integration

Frequency Of Submission: Each report will be submitted for approval and resubmitted, if required, until approved by the SRP.

Additional Submissions: Submittal of the Hazard Report and System Description will be based on associated needs of the Joint ISS and SSP Safety Review Panels.

11. MAINTENANCE: The document shall be delivered and maintained electronically. Changes shall be incorporated as required by change page or complete reissue.

12. COPIES/DISTRIBUTION:

1 original record (hard copy): OL/Data Management

1 copy (electronic): ISS VMDB electronic library

13. REMARKS: The Hazard Report and System Description shall be prepared in accordance with SSP 30309 in support of the safety review process and CoFR.

NASA Data Management will send notification to the following:

Executive Secretary
Safety Review Panel
NE42

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SECTION J-3

SAFETY AND HEALTH PLAN

The contractor shall comply with and submit DRD B-SM-02, Safety and Health (S&H) Plan. Upon contract award, this plan will be incorporated as Attachment J-3 of the final contract.

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ATTACHMENT J-4

AWARD FEE EVALUATION PLAN

I. INTRODUCTION

In accordance with the provisions of the Federal Acquisition Regulation (FAR), and NASA and JSC policies, a performance evaluation procedure is hereby established for determination of award fees payable under this contract. The payment of any award fee is contingent upon compliance with contractual requirements and performance to the degree specified in Paragraph III of this Plan.

The contractor's performance will be evaluated by the Government at the expiration of each period specified in Appendix 3, Award Fee Distribution. The evaluation to be performed by the Government will be based on the Government's assessment of the contractor's accomplishment of the various areas of work covered by the Statement of Work, in accordance with the factors, weightings, procedures, and other provisions set forth below.

Seventy-five percent of the potential fee earned will be based upon the contractor's performance measured against objective performance criteria in areas of safety, technical, management, customer satisfaction, and cost control.

Twenty-five percent of the potential fee earned will be based upon a subjective assessment of contractor performance and is intended to provide incentives for process improvements, encourage effective working relationships and cooperation between Associate ISS Contractors, and to highlight specific Areas of Emphasis (AOE) to the contractor.

Each fee evaluation rating is discrete and final. Unearned fee in a given period cannot be reassessed or moved into subsequent fee evaluation periods for consideration. An overall performance evaluation and fee determination of zero shall be made for any evaluation period when there is a major breach of safety or security as defined in NFS 1852.223-75, Major Breach of Safety or Security.

II. ORGANIZATIONAL STRUCTURE

A. Performance Evaluation Board Integration Team (PEB-IT)

The PEB-IT will be composed of selected NASA technical and administrative personnel and headed by the Contracting Officer's Technical Representative (COTR). The COTR will be the focal point for the accumulation and development of Award Fee evaluation reports, reviews, and presentations, as well as discussions with contractor management on Award Fee matters. The PEB-IT will evaluate the Contractor's performance as related to the criteria listed in paragraph III below.

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This team will furnish the contractor interim performance evaluations every three months. It shall be the purpose of these communications to discuss any specific areas where the contractor has excelled and areas where future improvement is necessary.

The PEB-IT will prepare a 6-month evaluation report for review by the PEB for each evaluation period. This report will include a recommendation to the PEB as to the adjective rating and numerical score to be assigned for the Contractor's performance for the period evaluated.

B. Performance Evaluation Board (PEB)

A Performance Evaluation Board (PEB) is comprised of selected technical and administrative personnel of NASA, will assess the contractor's performance after each evaluation period to determine whether, and to what extent, the contractor's performance during the evaluation period is deserving of the payment of award fee. The Board, at the end of each evaluation period, will approve the PEB-IT report (PEBR) and prepare a summary of the evaluations for review by the Fee Determination Official (FDO). This summary will include a recommendation to the FDO as to the adjective rating and numerical score to be assigned for the contractor's performance in the preceding evaluation period.

C. Fee Determination Official

The ISS Program Manager, or his designee, is the FDO. After considering available pertinent information and recommendations, the FDO will make a performance determination for each period in accordance with the provisions of this Attachment J-4 and of G.2, Award Fee for Service Contracts.

In the event the FDO has not received a submission from the contractor, the performance determination will not be considered final until expiration of the 5-working day period prescribed above for contractor submissions unless the contractor has affirmatively indicated, in writing, that no contractor submission will be made.

III. EVALUATION PROCEDURES

Award Fee Periods

Each award fee period shall be 6 months in length, except for the first award fee period which shall be 5 months. The first award fee period shall encompass the Transition Period and the first three months after contract start. The interim review for the first period shall cover performance during the Transition period. Performance during the Transition period will affect the Award Fee score for the first period even though there is no fee associated with the Transition period.

Objective and Subjective Criteria

No later than 30 days prior to the start of each Award Fee evaluation period, the contractor may submit to the Contracting Officer recommended objective performance metrics, weightings, and

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Areas of Emphasis (AOEs) for consideration by the Government to be used for the ensuing evaluation period.

Objective performance metrics and AOEs will be established for each evaluation period by the Government and communicated to the contractor at least 15 calendar days prior to the start of each evaluation period. The Government may unilaterally change the weightings of the criteria from period to period. However, cost control will not fall below 25 percent.

Contractor Self Evaluation and Submissions

The contractor may furnish a self-evaluation for each evaluation period. The self-evaluation must be received by the Contracting Officer not later than 30 days prior to the end of the period.

The Contractor will be furnished a copy of the PEB's findings, conclusions, and fee recommendation. The Contractor will be afforded the opportunity to submit for consideration of the FDO: (a) proposed evaluations or conclusions, or (b) exceptions to the evaluations, conclusions, or fee recommendations of the PEB, and (c) supporting reasons for such exceptions or proposed evaluations or conclusions. The Contractor's submissions must be made in writing and must be submitted through the Contracting Officer to the FDO within 5 calendar days from the date of the contractor's receipt of the PEB findings and fee recommendations. If the contractor does not provide additional information to the Contracting Officer within the time stated above the Government will regard this as the recommended rating and score being accepted by the contractor.

The FDO will consider the recommendation of the PEB, PEBR, information provided by the contractor, if any, and any other pertinent information in determining the performance score. The FDO's determination of the score will be stated in a written Award Fee Determination and will be provided to the contractor by the Contracting Officer within 45 days after the end of the evaluation period.

The contractor shall submit to the Contracting Officer a Corrective Action Plan (CAP) for any major weaknesses or failing objective performance areas identified by the Government as part of the evaluation. The CAP should include a description of the non-conformance, determination of the root cause of the non-conformance, action required to correct the weakness and prevent recurrences, and the schedule for completion of the action. The CAP shall be submitted to the Contracting Officer within 30 calendar days after receipt of the final performance determination for each evaluation period. Corrective Actions will be closed by concurrence from the Contracting Officer and the COTR. Failure to submit a CAP with the timeframe stated above will result in a major weakness in the next evaluation period.

IV. EVALUATION CRITERIA AND WEIGHTINGS

The Government will use objective criteria and subjective factors as a basis for arriving at the Award Fee score. Objective metrics will be developed using a tiered approach of increasingly important metrics to measure the contractor's performance and assist the Government in the Award Fee evaluation process. The metrics will be divided into three linked categories

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describing how lower level metrics effect the outcome of upper level metrics. Category I metrics are the most important outcome based metrics, Category II are considered important leading indicator metrics, and Category III are intended to assess trends. The contractor's performance against the metrics combined with the Government's subjective assessment will be used to arrive at an overall Award Fee score.

Performance/Objective Fee

The performance fee encourages contractor focus on overall safety, technical, management, customer satisfaction, and cost control. The Government will use objective criteria as a basis for arriving at a performance fee score. The maximum performance fee score possible is 75 points. The performance fee score will be determined from the contractor's performance of the Category I metrics and will be evaluated on a pass/fail criteria. If the contractor meets all Category I metrics, the performance fee score awarded will be 75 points. If the contractor does not meet all Category I metrics, the FDO will consider the significance of the failure and determine the score. Performance Fee Metric Subject Areas are identified in Enclosure II.

Award/Subjective Fee

The award fee encourages contractor focus on process improvements, relationships with Associate ISS Contractors, and Areas of Emphasis. The Government will use subjective factors as a basis for arriving at the award fee score. The maximum award fee score possible is 25 points.

<u>Evaluation Criteria</u>	<u>Weight</u>	<u>Total Weight</u>
Objective		
Safety		
Technical		
Management		
Customer Satisfaction Metrics		
Cost	not less than 25%	
Total		75%
Subjective		
Process Improvements		
ACA Relationships		
Areas of Emphasis		
Customer Satisfaction		
Total		25%

Cost performance will be evaluated against the negotiated cost baseline for the award fee period. Other relevant factors will also be taken into account for the cost evaluation (e.g. quantity of products and services ordered).

In order to earn any award fee, the Contractor must receive a numerical rating higher than 60. Enclosure I, Evaluation Definitions provides the performance level definition adjective ratings

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and corresponding numerical scores that will be used in evaluating performance. The numerical grade ranges corresponding to the adjective ratings and their conversion to percent of available award fee earned is set forth in Enclosure III.

V. List of Enclosures

Enclosure I, Numerical Ranges and Adjective Definitions, sets forth the adjective ratings, definitions, and associated numerical ranges to be used to define the various levels of performance under the contract.

Enclosure II, Performance Fee Metrics

Enclosure III, Score Conversion Chart

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ADJECTIVE RATING	RANGE OF POINTS	DESCRIPTION
Excellent	100 - 91	Of exceptional merit; exemplary performance in a timely, efficient and economical manner; very minor (if any) deficiencies with no adverse effect on overall performance.
Very Good	90 - 81	Very effective performance, fully responsive to contract; contract requirements accomplished in a timely, efficient and economical manner for the most part; only minor deficiencies.
Good	80 - 71	Effective performance; fully responsive to contract requirements; reportable deficiencies, but with little identifiable effect on overall performance.
Satisfactory	70 - 61	Meets or slightly exceeds minimum acceptable standards; adequate results; reportable deficiencies with identifiable, but not substantial, effects on overall performance.
Poor/Unsatisfactory	60 - 0	Does not meet minimum acceptable standards in one or more areas; remedial action required in one or more areas; deficiencies in one or more areas which adversely affect overall performance.

Enclosure II**Performance/Objective Fee Metrics**

Objective Performance Metrics will be established prior to each Award Fee Evaluation Period. The Metrics will be useful measurements of performance based on measurement factors from the Earned Value Methodology (DRD B-PC-05) and the Performance Assessment Plan & Performance Assessment Reports (DRD B-PM-04) and other COTR approved measurements.

Performance/Objective Fee Metric Subject Areas

- Safety
- Technical
- Management
- Cost Control
- Customer Satisfaction
- International Partners Integration Effectiveness
- Mission Integration Effectiveness
- S&MA Effectiveness
- Timely Reporting and Corrective Action Planning
- Products and Processes Supporting Mission Integration Readiness
- Sustaining of Existing Products and Processes; & Development of New Capability Effectiveness
- Total Contract Cost Performance Against Negotiated Estimated Cost

NNJ04AA02C
(SECTION J-4)

Mission Integration Contract

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Enclosure III: Score Conversion Chart

<u>Combined Performance/Award Fee Score</u>		<u>Percentage of Available Fee</u>
100		100.0%
99		99.0
98		98.0
97		97.0
96	Excellent	96.0
95		95.0
94		94.0
93		93.0
92		92.0
91		91.0
<hr/>		
90		90.0
89		89.0
88		88.0
87		87.0
86		86.0
85	Very Good	85.0
84		84.0
83		83.0
82		82.0
81		81.0
<hr/>		
80		80.0
79		79.0
78		78.0
77		77.0
76		76.0
75	Good	75.0
74		74.0
73		73.0
72		72.0
71		71.0
<hr/>		
70		70.0
69		69.0
68		68.0
67		67.0
66		66.0
65	Satisfactory	65.0
64		64.0
63		63.0
62		62.0
61		61.0
<hr/>		
60 and below		0.0

NNJ04AA02C
(SECTION J-4)

Mission Integration Contract

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AWARD FEE DISTRIBUTION

Period No.	Evaluation Periods	Available Fee	Earned Fee
1	11/01/03 – 03/31/04	\$	\$ -
2	04/01/04 – 09/30/04	\$	\$ -
3	10/01/04 – 03/31/05	\$	\$ -
4	04/01/05 – 09/30/05	\$	\$ -
5	10/01/05 – 03/31/06	\$	\$ -
6	04/01/06 – 09/30/06	\$	\$ -
7	10/01/06 – 03/31/07	\$	\$ -
8	04/01/07 – 09/30/07	\$	\$ -
9	10/01/07 – 03/31/08	\$	\$ -
10	04/01/08 – 09/30/08	\$	\$
OPTION 1	Evaluation Periods		
10	10/01/08 – 03/31/09	\$	\$ -
11	04/01/09 – 09/30/09	\$	\$ -
OPTION 2	Evaluation Periods		
12	10/01/09 – 03/31/10	\$	\$ -
13	04/01/10 – 09/30/10	\$	\$ -

January 1996

U.S. DEPARTMENT OF LABOR

EMPLOYMENT STANDARDS
ADMINISTRATION**NOTICE OF INTENTION TO MAKE
A SERVICE CONTRACT AND RESPONSE TO
NOTICE***(See Instructions on Reverse)*

1. NOTICE NO.

A-2241838
Memorandum**MAIL TO:****Administrator
Wage and Hour Division
U.S. Department of Labor
Washington, DC 20210**2. Estimated solicitation date *(use numerals)*
New Procurement

Month	Day	Year
02	18	03

3. Estimated date bids or proposals to be opened
or negotiations begun *(use numerals)*

Month	Day	Year
06	13	03

4. Date contract performance to begin *(use numerals)*

Month	Day	Year
01	01	04

5. PLACE(S) OF PERFORMANCE

Harris County, Houston, TX6. SERVICES TO BE PERFORMED *(describe)*

II: International Space Station Mission Integration Contract

Contract Period: January 1, 2004 to December 31, 2004

7. INFORMATION ABOUT PERFORMANCE

A. ☒ Services now performed by a contractor
 B. ☐ Services now performed by Federal employees
 C. ☐ Services not presently being performed

8. IF BOX A IN ITEM 7 IS MARKED, COMPLETE ITEM 8 AS APPLICABLE

a. Name and address of incumbent contractor

See attached list

b. Number(s) of any wage determination(s) in incumbent's contract

WD 94-2516

c. Name(s) of union(s) if services are being performed under collective bargaining
agreement(s). **Important:** Attach copies of current applicable collective
bargaining agreements

None

9. OFFICIAL SUBMITTING NOTICE

SIGNED:

DATE

TYPE OR PRINT NAME

Connie R. Pritchard
Contract Labor Relations Officer

TELEPHONE NO.

281-483-4121

10. TYPE OR PRINT NAME AND TITLE OF PERSON TO WHOM RESPONSE IS TO BE SENT
AND NAME AND ADDRESS OF DEPARTMENT OR AGENCY, BUREAU, DIVISION, ETC.**NASA Johnson Space Center
Connie R. Pritchard, Mail Code BA2
2101 NASA Road One
Houston, TX 77058****RESPONSE TO NOTICE***(by Department of Labor)*A. ☒ The attached wage determination(s)
listed below apply to procurement.
WD 94-2516 Rev 21B. ☐ As of this date, no wage determination
applicable to the specified locality and
classes of employees is in effect.C. ☐ From information supplied, the Service
Contract Act does not apply *(see attached
explanation)*.D. ☐ Notice returned for additional information
*(see attached explanation)*Signed: _____
*(U.S. Department of Labor)*_____
(Date)

COMPUTER-GENERATED

SF98 Request
A2241838
International Space Station Mission Integration Contract
NASA Johnson Space Center

Item # 8a Name and address of incumbent contactors that are currently performing a portion of the work to be included in this recompetition:

NAS 9-18800 Johnson Engineering
12130 Highway 3, Building 1
Webster, TX 77598-1504

NAS 9-01054 The Futron Corporation
7315 Wisconsin Avenue, Suite 900W
Bethesda, MD 20814-3202

NAS 9-01090 Blackhawk Management Corp.
1335 Regents Park Drive, Suite 130
Houston, TX 77058

NAS 9-97135 Muniz Engineering
16903 Bucaneer Lane
Suite 200
Houston, TX 77058

NAS 9-20000 United Space Alliance
1150 Gemini
Houston, TX 77058-2708

NAS 15-10215 Barrios Technology, Inc.
2525 Bay Area Blvd., Suite 300
Houston, TX 77058

NAS 9-19549 Tech Trans International
2200 Space Park Dr., Suite 410
Houston, TX 77059

NAS 15-10000 Boeing Company
13100 Space Center Blvd.
Houston, TX 77059

[illegible]

94-2516 TX, HOUSTON 06/10/03
***FOR OFFICIAL USE ONLY BY FEDERAL AGENCIES PARTICIPATING IN MOU
WITH DOL***
WASHINGTON D.C. 20210

William W.Gross	Division of	Wage Determination No.: 1994-2516
Director	Wage Determinations	Revision No.: 21
		Date Of Last Revision: 06/03/2003

State: Texas

Area: Texas Counties of Austin, Brazoria, Chambers, Colorado, Fort Bend, Galveston, Grimes, Harris, Houston, Jackson, Lavaca, Liberty, Madison, Matagorda, Montgomery, San Jacinto, Trinity, Walker, Waller, Washington, Wharton

Fringe Benefits Required Follow the Occupational Listing

OCCUPATION CODE - TITLE	MINIMUM WAGE RATE
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01000 - Administrative Support and Clerical Occupations

01011 - Accounting Clerk I	11.45
01012 - Accounting Clerk II	12.35
01013 - Accounting Clerk III	13.86
01014 - Accounting Clerk IV	15.29
01030 - Court Reporter	16.81
01050 - Dispatcher, Motor Vehicle	14.00
01060 - Document Preparation Clerk	11.66
01070 - Messenger (Courier)	9.87
01090 - Duplicating Machine Operator	10.72
01110 - Film/Tape Librarian	11.50
01115 - General Clerk I	9.09
01116 - General Clerk II	9.86
01117 - General Clerk III	12.77
01118 - General Clerk IV	14.65
01120 - Housing Referral Assistant	17.60
01131 - Key Entry Operator I	10.76
01132 - Key Entry Operator II	13.76
01191 - Order Clerk I	12.51
01192 - Order Clerk II	14.27
01261 - Personnel Assistant (Employment) I	12.28
01262 - Personnel Assistant (Employment) II	13.79
01263 - Personnel Assistant (Employment) III	16.50
01264 - Personnel Assistant (Employment) IV	17.63
01270 - Production Control Clerk	17.94
01290 - Rental Clerk	14.34
01300 - Scheduler, Maintenance	14.52
01311 - Secretary I	14.52
01312 - Secretary II	16.12
01313 - Secretary III	17.60
01314 - Secretary IV	20.69

01315 - Secretary V	25.57
01320 - Service Order Dispatcher	13.30
01341 - Stenographer I	12.06
01342 - Stenographer II	14.34
01400 - Supply Technician	20.69
01420 - Survey Worker (Interviewer)	14.26
01460 - Switchboard Operator-Receptionist	10.65
01510 - Test Examiner	16.12
01520 - Test Proctor	16.12
01531 - Travel Clerk I	11.09
01532 - Travel Clerk II	11.95
01533 - Travel Clerk III	12.79
01611 - Word Processor I	11.45
01612 - Word Processor II	13.79
01613 - Word Processor III	16.27

03000 - Automatic Data Processing Occupations

03010 - Computer Data Librarian	11.98
03041 - Computer Operator I	12.05
03042 - Computer Operator II	14.61
03043 - Computer Operator III	16.59
03044 - Computer Operator IV	22.60
03045 - Computer Operator V	23.59
03071 - Computer Programmer I (1)	19.99
03072 - Computer Programmer II (1)	24.38
03073 - Computer Programmer III (1)	27.62
03074 - Computer Programmer IV (1)	27.62
03101 - Computer Systems Analyst I (1)	25.70
03102 - Computer Systems Analyst II (1)	27.62
03103 - Computer Systems Analyst III (1)	27.62
03160 - Peripheral Equipment Operator	12.36

05000 - Automotive Service Occupations

05005 - Automotive Body Repairer, Fiberglass	21.26
05010 - Automotive Glass Installer	19.86
05040 - Automotive Worker	19.15
05070 - Electrician, Automotive	20.76
05100 - Mobile Equipment Servicer	17.65
05130 - Motor Equipment Metal Mechanic	22.47
05160 - Motor Equipment Metal Worker	19.15
05190 - Motor Vehicle Mechanic	22.47
05220 - Motor Vehicle Mechanic Helper	16.93
05250 - Motor Vehicle Upholstery Worker	18.17
05280 - Motor Vehicle Wrecker	19.15
05310 - Painter, Automotive	20.76
05340 - Radiator Repair Specialist	20.96
05370 - Tire Repairer	14.40
05400 - Transmission Repair Specialist	23.06

07000 - Food Preparation and Service Occupations

(not set) - Food Service Worker	7.39
07010 - Baker	8.93
07041 - Cook I	8.19
07042 - Cook II	8.83
07070 - Dishwasher	7.16
07130 - Meat Cutter	11.33
07250 - Waiter/Waitress	6.83

09000 - Furniture Maintenance and Repair Occupations

09010 - Electrostatic Spray Painter	16.65
09040 - Furniture Handler	11.74
09070 - Furniture Refinisher	12.78
09100 - Furniture Refinisher Helper	13.74
09110 - Furniture Repairer, Minor	15.29
09130 - Upholsterer	16.65

11030 - General Services and Support Occupations

11030 - Cleaner, Vehicles	7.54
11060 - Elevator Operator	6.90
11090 - Gardener	10.26
11121 - House Keeping Aid I	6.79
11122 - House Keeping Aid II	6.90
11150 - Janitor	7.54
11210 - Laborer, Grounds Maintenance	8.23
11240 - Maid or Houseman	6.79
11270 - Pest Controller	10.73
11300 - Refuse Collector	7.54
11330 - Tractor Operator	9.66
11360 - Window Cleaner	8.23

12000 - Health Occupations

12020 - Dental Assistant	12.93
12040 - Emergency Medical Technician (EMT) Paramedic/Ambulance Driver	11.75
12071 - Licensed Practical Nurse I	12.86
12072 - Licensed Practical Nurse II	14.63
12073 - Licensed Practical Nurse III	15.94
12100 - Medical Assistant	11.41
12130 - Medical Laboratory Technician	13.61
12160 - Medical Record Clerk	12.09
12190 - Medical Record Technician	14.56
12221 - Nursing Assistant I	7.08
12222 - Nursing Assistant II	9.82
12223 - Nursing Assistant III	10.62
12224 - Nursing Assistant IV	12.40
12250 - Pharmacy Technician	13.10
12280 - Phlebotomist	13.30
12311 - Registered Nurse I	20.25
12312 - Registered Nurse II	24.95
12313 - Registered Nurse II, Specialist	26.51

12314 - Registered Nurse III	31.37
12315 - Registered Nurse III, Anesthetist	31.37
12316 - Registered Nurse IV	35.94

13000 - Information and Arts Occupations

13002 - Audiovisual Librarian	18.40
13011 - Exhibits Specialist I	19.15
13012 - Exhibits Specialist II	24.55
13013 - Exhibits Specialist III	28.72
13041 - Illustrator I	17.60
13042 - Illustrator II	22.56
13043 - Illustrator III	26.40
13047 - Librarian	21.17
13050 - Library Technician	12.96
13071 - Photographer I	13.93
13072 - Photographer II	17.60
13073 - Photographer III	22.56
13074 - Photographer IV	26.40
13075 - Photographer V	30.06

15000 - Laundry, Dry Cleaning, Pressing and Related Occupations

15010 - Assembler	7.68
15030 - Counter Attendant	7.68
15040 - Dry Cleaner	9.65
15070 - Finisher, Flatwork, Machine	7.68
15090 - Presser, Hand	7.68
15100 - Presser, Machine, Drycleaning	7.68
15130 - Presser, Machine, Shirts	7.68
15160 - Presser, Machine, Wearing Apparel, Laundry	7.68
15190 - Sewing Machine Operator	10.22
15220 - Tailor	11.02
15250 - Washer, Machine	8.42

19000 - Machine Tool Operation and Repair Occupations

19010 - Machine-Tool Operator (Toolroom)	16.65
19040 - Tool and Die Maker	19.20

21000 - Material Handling and Packing Occupations

21010 - Fuel Distribution System Operator	16.33
21020 - Material Coordinator	17.64
21030 - Material Expediter	17.64
21040 - Material Handling Laborer	11.72
21050 - Order Filler	10.53
21071 - Forklift Operator	12.84
21080 - Production Line Worker (Food Processing)	12.84
21100 - Shipping/Receiving Clerk	11.79
21130 - Shipping Packer	12.22
21140 - Store Worker I	9.51
21150 - Stock Clerk (Shelf Stocker; Store Worker II)	12.79
21210 - Tools and Parts Attendant	13.58
21400 - Warehouse Specialist	12.84

23000 - Mechanics and Maintenance and Repair Occupations

23010 - Aircraft Mechanic	21.09
23040 - Aircraft Mechanic Helper	16.43
23050 - Aircraft Quality Control Inspector	22.02
23060 - Aircraft Servicer	18.28
23070 - Aircraft Worker	19.26
23100 - Appliance Mechanic	16.65
23120 - Bicycle Repairer	13.91
23125 - Cable Splicer	19.33
23130 - Carpenter, Maintenance	17.01
23140 - Carpet Layer	15.92
23160 - Electrician, Maintenance	21.45
23181 - Electronics Technician, Maintenance I	13.36
23182 - Electronics Technician, Maintenance II	19.02
23183 - Electronics Technician, Maintenance III	22.33
23260 - Fabric Worker	15.00
23290 - Fire Alarm System Mechanic	17.43
23310 - Fire Extinguisher Repairer	14.40
23340 - Fuel Distribution System Mechanic	19.17
23370 - General Maintenance Worker	15.46
23400 - Heating, Refrigeration and Air Conditioning Mechanic	17.43
23430 - Heavy Equipment Mechanic	17.43
23440 - Heavy Equipment Operator	17.43
23460 - Instrument Mechanic	17.43
23470 - Laborer	8.82
23500 - Locksmith	16.65
23530 - Machinery Maintenance Mechanic	19.81
23550 - Machinist, Maintenance	20.16
23580 - Maintenance Trades Helper	13.58
23640 - Millwright	19.02
23700 - Office Appliance Repairer	16.65
23740 - Painter, Aircraft	18.32
23760 - Painter, Maintenance	16.65
23790 - Pipefitter, Maintenance	19.33
23800 - Plumber, Maintenance	17.15
23820 - Pneudraulic Systems Mechanic	17.43
23850 - Rigger	17.43
23870 - Scale Mechanic	15.92
23890 - Sheet-Metal Worker, Maintenance	17.43
23910 - Small Engine Mechanic	15.92
23930 - Telecommunication Mechanic I	19.17
23931 - Telecommunication Mechanic II	20.02
23950 - Telephone Lineman	17.43
23960 - Welder, Combination, Maintenance	17.43
23965 - Well Driller	17.43
23970 - Woodcraft Worker	17.43
23980 - Woodworker	9.64

24000 - Personal Needs Occupations

24570 - Child Care Attendant	9.68
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24580 - Child Care Center Clerk	12.06
24600 - Chore Aid	6.15
24630 - Homemaker	15.41

25000 - Plant and System Operation Occupations

25010 - Boiler Tender	19.86
25040 - Sewage Plant Operator	17.00
25070 - Stationary Engineer	19.86
25190 - Ventilation Equipment Tender	14.33
25210 - Water Treatment Plant Operator	16.65

27000 - Protective Service Occupations

(not set) - Police Officer	19.63
27004 - Alarm Monitor	12.98
27006 - Corrections Officer	18.04
27010 - Court Security Officer	18.04
27040 - Detention Officer	18.04
27070 - Firefighter	17.70
27101 - Guard I	10.02
27102 - Guard II	17.90

28000 - Stevedoring/Longshoremen Occupations

28010 - Blocker and Bracer	15.18
28020 - Hatch Tender	15.18
28030 - Line Handler	15.18
28040 - Stevedore I	14.21
28050 - Stevedore II	16.17

29000 - Technical Occupations

21150 - Graphic Artist	23.11
29010 - Air Traffic Control Specialist, Center (2)	31.76
29011 - Air Traffic Control Specialist, Station (2)	21.90
29012 - Air Traffic Control Specialist, Terminal (2)	24.12
29023 - Archeological Technician I	19.34
29024 - Archeological Technician II	21.66
29025 - Archeological Technician III	26.79
29030 - Cartographic Technician	26.79
29035 - Computer Based Training (CBT) Specialist/ Instructor	25.70
29040 - Civil Engineering Technician	24.82
29061 - Drafter I	15.37
29062 - Drafter II	15.85
29063 - Drafter III	20.90
29064 - Drafter IV	26.79
29081 - Engineering Technician I	14.00
29082 - Engineering Technician II	17.40
29083 - Engineering Technician III	20.25
29084 - Engineering Technician IV	25.71
29085 - Engineering Technician V	33.57
29086 - Engineering Technician VI	38.16
29090 - Environmental Technician	24.76
29100 - Flight Simulator/Instructor (Pilot)	32.45

29160 - Instructor	21.34
29210 - Laboratory Technician	16.34
29240 - Mathematical Technician	28.04
29361 - Paralegal/Legal Assistant I	17.19
29362 - Paralegal/Legal Assistant II	20.65
29363 - Paralegal/Legal Assistant III	25.71
29364 - Paralegal/Legal Assistant IV	28.58
29390 - Photooptics Technician	24.76
29480 - Technical Writer	21.85
29491 - Unexploded Ordnance (UXO) Technician I	20.19
29492 - Unexploded Ordnance (UXO) Technician II	24.42
29493 - Unexploded Ordnance (UXO) Technician III	30.65
29494 - Unexploded (UXO) Safety Escort	20.19
29495 - Unexploded (UXO) Sweep Personnel	20.19
29620 - Weather Observer, Senior (3)	21.81
29621 - Weather Observer, Combined Upper Air and Surface Programs (3)	17.99
29622 - Weather Observer, Upper Air	17.99

31000 - Transportation/ Mobile Equipment Operation Occupations

31030 - Bus Driver	14.24
31260 - Parking and Lot Attendant	7.38
31290 - Shuttle Bus Driver	10.80
31300 - Taxi Driver	8.01
31361 - Truckdriver, Light Truck	10.96
31362 - Truckdriver, Medium Truck	14.24
31363 - Truckdriver, Heavy Truck	15.22
31364 - Truckdriver, Tractor-Trailer	15.22

99000 - Miscellaneous Occupations

99020 - Animal Caretaker	8.13
99030 - Cashier	7.90
99041 - Carnival Equipment Operator	9.36
99042 - Carnival Equipment Repairer	9.84
99043 - Carnival Worker	7.22
99050 - Desk Clerk	9.68
99095 - Embalmer	19.59
99300 - Lifeguard	10.61
99310 - Mortician	21.55
99350 - Park Attendant (Aide)	13.32
99400 - Photofinishing Worker (Photo Lab Tech., Darkroom Tech)	8.62
99500 - Recreation Specialist	14.74
99510 - Recycling Worker	11.12
99610 - Sales Clerk	10.30
99620 - School Crossing Guard (Crosswalk Attendant)	7.54
99630 - Sport Official	9.48
99658 - Survey Party Chief (Chief of Party)	16.58
99659 - Surveying Technician (Instr. Person/Surveyor Asst./Instr.)	14.34
99660 - Surveying Aide	11.35
99690 - Swimming Pool Operator	12.60
99720 - Vending Machine Attendant	10.49

99730 - Vending Machine Repairer
99740 - Vending Machine Repairer Helper

12.60
10.76

ALL OCCUPATIONS LISTED ABOVE RECEIVE THE FOLLOWING BENEFITS:

HEALTH & WELFARE: Life, accident, and health insurance plans, sick leave, pension plans, civic and personal leave, severance pay, and savings and thrift plans. Minimum employer contributions costing an average of \$2.56 per hour computed on the basis of all hours worked by service employees employed on the contract.

VACATION: 2 weeks paid vacation after 1 year of service with a contractor or successor; 3 weeks after 5 years, and 4 weeks after 15 years. Length of service includes the whole span of continuous service with the present contractor or successor, wherever employed, and with the predecessor contractors in the performance of similar work at the same Federal facility. (Reg. 29 CFR 4.173)

HOLIDAYS: A minimum of ten paid holidays per year: New Year's Day, Martin Luther King Jr.'s Birthday, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day, and Christmas Day. (A contractor may substitute for any of the named holidays another day off with pay in accordance with a plan communicated to the employees involved.) (See 29 CFR 4.174)

THE OCCUPATIONS WHICH HAVE PARENTHESES AFTER THEM RECEIVE THE FOLLOWING BENEFITS (as numbered):

1) Does not apply to employees employed in a bona fide executive, administrative, or professional capacity as defined and delineated in 29 CFR 541. (See CFR 4.156)

2) **APPLICABLE TO AIR TRAFFIC CONTROLLERS ONLY - NIGHT DIFFERENTIAL:** An employee is entitled to pay for all work performed between the hours of 6:00 P.M. and 6:00 A.M. at the rate of basic pay plus a night pay differential amounting to 10 percent of the rate of basic pay.

3) **WEATHER OBSERVERS - NIGHT PAY & SUNDAY PAY:** If you work at night as part of regular tour of duty, you will earn a night differential and receive an additional 10% of basic pay for any hours worked between 6pm and 6am. If you are a full-time employed (40 hours a week) and Sunday is part of your regularly scheduled workweek, you are paid at your rate of basic pay plus a Sunday premium of 25% of your basic rate for each hour of Sunday work which is not overtime (i.e. occasional work on Sunday outside the normal tour of duty is considered overtime work).

HAZARDOUS PAY DIFFERENTIAL: An 8 percent differential is applicable to employees employed in a position that represents a high degree of hazard when working with or in close proximity to ordinance, explosives, and incendiary materials. This includes work such as screening, blending, dying, mixing, and pressing of sensitive ordnance, explosives, and pyrotechnic compositions such as lead azide, black powder and photoflash powder. All dry-house activities involving propellants or explosives. Demilitarization, modification, renovation, demolition, and maintenance operations on sensitive ordnance, explosives and incendiary materials. All operations involving regrading and cleaning of artillery ranges.

A 4 percent differential is applicable to employees employed in a position that represents a low degree of hazard when working with, or in close proximity to ordnance, (or employees possibly adjacent to) explosives and incendiary materials which involves potential injury such as laceration of hands, face, or arms of the employee engaged in the operation, irritation of the skin, minor burns and the like; minimal damage to immediate or adjacent work area or equipment being used. All operations involving, unloading, storage, and hauling of ordnance, explosive, and incendiary ordnance material other than small arms ammunition. These differentials are only applicable to work that has been specifically designated by the agency for ordnance, explosives, and incendiary material differential pay.

**** UNIFORM ALLOWANCE ****

If employees are required to wear uniforms in the performance of this contract (either by the terms of the Government contract, by the employer, by the state or local law, etc.), the cost of furnishing such uniforms and maintaining (by laundering or dry cleaning) such uniforms is an expense that may not be borne by an employee where such cost reduces the hourly rate below that required by the wage determination. The Department of Labor will accept payment in accordance with the following standards as compliance:

The contractor or subcontractor is required to furnish all employees with an adequate number of uniforms without cost or to reimburse employees for the actual cost of the uniforms. In addition, where uniform cleaning and maintenance is made the responsibility of the employee, all contractors and subcontractors subject to this wage determination shall (in the absence of a bona fide collective bargaining agreement providing for a different amount, or the furnishing of contrary affirmative proof as to the actual cost), reimburse all employees for such cleaning and maintenance at a rate of \$3.35 per week (or \$.67 cents per day). However, in those instances where the uniforms furnished are made of "wash and wear" materials, may be routinely washed and dried with other personal garments, and do not require any special treatment such as dry cleaning, daily washing, or commercial laundering in order to meet the cleanliness or appearance standards set by the terms of the Government contract, by the contractor, by law, or by the nature of the work, there is no requirement that employees be reimbursed for uniform maintenance costs.

**** NOTES APPLYING TO THIS WAGE DETERMINATION ****

Source of Occupational Title and Descriptions:

The duties of employees under job titles listed are those described in the "Service Contract Act Directory of Occupations," Fourth Edition, January 1993, as amended by the Third Supplement, dated March 1997, unless otherwise indicated. This publication may be obtained from the Superintendent of Documents, at 202-783-3238, or by writing to the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Copies of specific job descriptions may also be obtained from the appropriate contracting officer.

REQUEST FOR AUTHORIZATION OF ADDITIONAL CLASSIFICATION AND WAGE RATE {Standard Form 1444 (SF 1444)}

Conformance Process:

The contracting officer shall require that any class of service employee which is not listed herein and which is to be employed under the contract (i.e., the work to be performed is not performed by any classification listed in the wage determination), be classified by the contractor so as to

provide a reasonable relationship (i.e., appropriate level of skill comparison) between such unlisted classifications and the classifications listed in the wage determination. Such conformed classes of employees shall be paid the monetary wages and furnished the fringe benefits as are determined. Such conforming process shall be initiated by the contractor prior to the performance of contract work by such unlisted class(es) of employees. The conformed classification, wage rate, and/or fringe benefits shall be retroactive to the commencement date of the contract. {See Section 4.6 (C)(vi)} When multiple wage determinations are included in a contract, a separate SF 1444 should be prepared for each wage determination to which a class(es) is to be conformed.

The process for preparing a conformance request is as follows:

- 1) When preparing the bid, the contractor identifies the need for a conformed occupation) and computes a proposed rate).
- 2) After contract award, the contractor prepares a written report listing in order proposed classification title), a Federal grade equivalency (FGE) for each proposed classification), job description), and rationale for proposed wage rate), including information regarding the agreement or disagreement of the authorized representative of the employees involved, or where there is no authorized representative, the employees themselves. This report should be submitted to the contracting officer no later than 30 days after such unlisted class(es) of employees performs any contract work.
- 3) The contracting officer reviews the proposed action and promptly submits a report of the action, together with the agency's recommendations and pertinent information including the position of the contractor and the employees, to the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, for review. (See section 4.6(b)(2) of Regulations 29 CFR Part 4).
- 4) Within 30 days of receipt, the Wage and Hour Division approves, modifies, or disapproves the action via transmittal to the agency contracting officer, or notifies the contracting officer that additional time will be required to process the request.
- 5) The contracting officer transmits the Wage and Hour decision to the contractor.
- 6) The contractor informs the affected employees.

Information required by the Regulations must be submitted on SF 1444 or bond paper.

When preparing a conformance request, the "Service Contract Act Directory of Occupations" (the Directory) should be used to compare job definitions to insure that duties requested are not performed by a classification already listed in the wage determination. Remember, it is not the job title, but the required tasks that determine whether a class is included in an established wage determination. Conformances may not be used to artificially split, combine, or subdivide classifications listed in the wage determination.